It's Important to Know In Time'

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The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

★ AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD

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Manufacturers' Recommended List Prices on Refrigerators Is 'Ceiling' for Retail Sales

OPA Order Effective March 30; Dealers Must Post Lists

WASHINGTON, D. C.—Maximum allowable retail prices of household mechanical refrigerators will be, effective Monday March 30, the prices established by manufacturers in their recommended retail price lists, according to an announcement made March 23 by the Office of Price Administration.

Price margins of wholesale distributors are "frozen" at the levels prevailing last Oct. 1-15.

One provision of the order requires that every dealer must post in a conspicuous place on his premises "a large notice setting forth the make, model number, and maximum price of the article offered for sale."

According to John E. Hamm, acting price administrator, refrigerator retailers who do not have copies of the retail prices recommended by the manufacturer should communicate with the factory at once and obtain the lists of maximum prices so that they may be posted in the store as quickly as possible.

The regulation for household mechanical refrigerators lists manufacturers recommended retail prices for the following makes—(the figures in parentheses indicate the model year): Norge (1941 and 1942), Copeland (1942), Crosley (1941 and 1942), Hotpoint (1941), General Electric (1941 and 1942), Frigidaire (1941 and 1942), Gibson (1941 and 1942), Montgomery Ward (1941 and 1942), Kelvinator (1941 and 1942), Leonard (1941 and 1942), Philco (1941 and 1942), Sears Coldspot (1941 and 1942), Stewart-Warner (1941 and 1942), Westinghouse (1941 and 1942).

The order setting maximums on refrigerator prices was part of a sweeping move to control retail prices of vacuum cleaners and attachments, heating and cooking stoves and ranges, washing and ironing machines, radio sets and phonographs, and typewriters.

Vacuum cleaner prices were placed under a "permanent regulation" very much like that of household refrigerators.

The OPA regulations applying to ranges, washing and ironing machines, and radios and phonographs are "temporary" in that they will remain in force for 60 days, and peg prices at the levels of Thursday, March 19.

To determine for posting purposes the maximum prices of three of the products covered by the temporary 60-day regulation (ranges, radios, and washers) retailers are instructed to take the highest net price at which each model was sold on March 19, or if no sale was made on March 19, then on the nearest previous date to March 19.

In the case of vacuum cleaners, which Mr. Hamm states are largely sold from door to door, a label must be attached to the appliance or attachment reading "the maximum cash price for this household vacuum cleaner or/and attachment, as established by the manufacturer."

The various makes (all 1941 models) listed in the vacuum cleaner order are: Airway, Apex, Birtman, Clements, Electrolux, Electric Vacuum Cleaner, Eureka, Gamele-Skogmo, Geier, General Electric, Hamilton Beach, Hoovers, Landers, Frary & Clark, Montgomery Ward, Regina, Scott & Fetzer, Sears, Roebuck & Co., Singer Sewing Machine, and Westinghouse Electric & Mfg. Co.

The order was issued by the OPA under the powers of the Emergency

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Carmine Elected Vice President Of Philco Corp.

PHILADELPHIA—James H. Carmine has been elected vice president in charge of merchandising of Philco Corp.

Mr. Carmine has been connected with Philco since becoming district representative in 1923 in Pittsburgh.

After acting as manager of the company's east central division, with headquarters in Buffalo, and, later in Cleveland, Mr. Carmine went to Chicago as sales manager of the middle west in 1932.

Three years ago he was transferred to the home offices to become assistant general sales manager and in 1941 was made general sales manager.

Staff Appointments For Priority Bureau Of WPB Announced

WASHINGTON, D. C. — Appointments to the staff of the Bureau of Priorities, Division of Industry Operations, WPB, have been announced by C. H. Matthiesen, Jr., Chief of the Bureau. The executive staff of the Bureau is now as follows:

Deputy Chief—John P. Gregg.

Assistant Chief, in charge of internal operations—Clem C. Crossland; assistant chief, in charge of policy—John H. Martin; assistant chief, in charge of enforcement—L. J. Martin; assistant chief, in charge of requirements—Henry P. Nelson, assistant—Jerome Low; assistant chief, in charge of priority specialists—Samual S. Stratton, assistant—Spaulding Birss.

Assistant to the Chief, assigned to Army and Navy Munitions Board—Clay C. Crawford; assistant to the chief—Arthur Harris; assistant to the chief—J. Wilton Peters.

Review and Approval Branch Chief—Stanley L. Phraner; inventory branch chief—E. A. Tupper; assistant inventories—George P. Torrence; assistant, investigation—Hector J. Dowd; distributors branch chief—Linford C. White; compliance branch chief—John H. Ward; production requirements branch chief—A. L. Williams; education and industrial

(Concluded on Page 16, Column 5)

Service Training Plan Started After Dealer Loses 12 To Army

NEW ORLEANS—After losing 12 experienced refrigeration servicemen in six months to the Army, M. T. Wetherbee, manager of Wands, Inc., appliance and commercial refrigeration dealership here, is protecting himself against further loss by training his own people.

Each of the 18 regular servicemen employed by the company has been appointed a "teacher" for one helper. Helpers, "live with" the experienced men, go on service calls, make estimates, do part of the work, and help to handle overflow business. In six months, thus, Mr. Wetherbee hopes to train enough men to keep a full size crew on hand.

Service Men Will Be Allowed New Cars, Pierce Tells Press

CHICAGO — Refrigeration service men can definitely buy new automobiles, Frank R. Pierce, vice president in charge of sales of Nash-Kelvinator, told a press conference here Wednesday. Mr. Pierce made certain of the point when conferring with car rationing authorities in Washington last week.

Mr. Pierce also announced that Nash-Kelvinator will underwrite monthly cash advances of $10 per car to all their automobile dealers throughout the United States to help them remain in business. This plan is retroactive to February, and will continue in force until March 15, 1943, or until the cars are sold.

Birmingham Utility Plans Curtailment Of Service Work

BIRMINGHAM, Ala.—The Birmingham Electric Co. has announced that because of the loss of employes to the armed services, the scarcity of some materials, and the critical situation in reference to trucks and tires that it will be necessary to curtail its repair and maintenance service somewhat.

Customers are asked to avoid making rush service calls and to try not to call on Saturdays, Sundays, or at night. They are asked to keep fuse plugs on hand and to make own replacements in case one burns out. Furthermore customers are requested to carry out small appliance purchases such as those of lamp bulbs, iron cords, and the like.

A suggestion is also made that householders have their refrigerators inspected before summer and have any needed repairs made in advance.

The Repair Parts 'Situation'

The proposed "refrigeration repair and maintenance parts" order which is supposed to grant graded priority ratings was thought to be ready for release last week, and a Congressman even wrote to a refrigeration supply jobber constituent assuring him that it would be, but when word finally came it was to the effect that "something significant" had happened to hold up the release, but that it would have "no direct effect" upon the order.

* * *

The WPB last week made an official promise that refrigeration supplies distributors (as well as supplies distributors in several other fields) would be given help in maintaining inventories with less priorities paper work by means of a new form PD-1X, to be issued sometime after April 1. (Details of the announcement will be found on page 4.) Opinion among refrigeration men is that this form will not give them the type of help they need and expect under a "refrigeration repair and maintenance parts" order.

* * *

The plumbing and heating field has been given priority assistance for repairs to residential installations through a new order P-84. The terms of the order seem to exclude much possibility of its being applied to air conditioning or commercial refrigeration applications. (Story on page 5.)

Copper Fabricators Warned on Reports

NEW YORK CITY—An official spokesman for the Copper Branch of the WPB declared last week that if fabricators do not file their reports by the 15th of the month they will receive no consideration in the matter of supplies, although this might close down their plants.

It is understood that despite extensions granted in March, reports from a number of fabricators were still missing by March 25.

It was also stated by authorities that the allocations in all likelihood would be further reduced because of the growing scarcity of supplies. What classes of consumers will be principally affected has not been determined. It is said that this question will depend upon the tonnage assigned for Army, Navy, and Lend-Lease requirements.

Fedders Profits Jump; Owosso Plant Sold

BUFFALO—Fedders Mfg. Co. has sold its Owosso, Mich. plant, the company disclosed in its annual report showing 1941 net income of $385,886 equal to $1.66 a share. This compares with net income in 1940 of $269,504, or $1.15 a share.

Sales last year were $9,045,639 compared with $5,987,619 in 1940.

The Michigan plant, built in 1939 for the manufacture of automobile heaters and tubular radiators, had been out of production because of the curtailment in automobile manufacturing.

"Strenuous efforts were being made to obtain war production contracts for the Owosso plant when Bendix Aviation, as an agent for the U. S. Defense Plant Corp., proposed the purchase of the Owosso plant," said President Theodore C. Fedders.

All-Industry Conference Set For May 11, 12, 13 In Chicago

Manufacturers, Jobbers & Service Men to Meet; WPB Men to Speak

CHICAGO—An All-Industry Meeting and Conference Clinic, sponsored by several associations within the refrigeration industry, has been scheduled for the Stevens hotel here May 11, 12, and 13.

Prominent speakers from the government and from the industry will appear at the meetings and outline the future position of refrigeration organizations in the war effort.

At the Conference Clinic, manufacturers will meet their customers in booths equipped only with table and chairs, and discuss detailed problems of working under priority regulations.

In conjunction with the All-Industry Conference, the Refrigeration Equipment Manufacturers, the National Refrigeration Supply Jobbers Association, and the Refrigeration Service Engineers Society will conduct their regular annual meetings. Other associations and societies within the industry will also take part.

California Trees Will Furnish Cork Supply

SAN FRANCISCO — Cork oak trees in the Redwood Empire region are being developed to produce a local supply of cork oak since the disruption of cork imports from Spain and Portugal, it is reported here.

The quality of California cork oak is equal to first stripping oak from forests in Spain and Portugal, manufacturers say.

Cork acorns were imported from Spain in 1878 and set out as a novelty. One group of about 70 trees located on a ranch in Napa County, north of San Francisco, yielded nearly 5,000 lbs. of cork, approximately 70 lbs. per tree, when stripped by experts last year.

Approximately 1,200 seedlings were set out this year in Napa and Sonoma counties, while the state nursery at Davis has about 14,000 available.

Proper Freezing Kills Trichinae In Pork

WASHINGTON, D. C. — Proper freezing will make pork safe for human consumption, so far as any lurking trichinae are concerned, U. S. Department of Agriculture scientists have announced.

Sections of pork or pork products less than 6 inches thick are freed of the dangerous parasites by exposure to a temperature of 5° F. for 20 days, —10° F. for 10 days, or —20° F. for six days.

Longer freezing will make thicker pieces of pork safe for eating.

Requirements Plan To Replace Blanket Ratings After Apr. 1

WASHINGTON, D. C.—A fundamental change in the priorities system was announced last weekend by J. S. Knowlson, Director of Industry Operations.

A specific requirements approach to the control and distribution of scarce materials will replace the use of general or blanket priority rating orders as rapidly as the necessary new orders and procedures can be put into effect. Between April 1 and June 30, most of the blanket rating orders will be revoked or allowed to expire, and companies which have been operating under blanket ratings will be required to apply for priority assistance under the Production Requirements Plan.

The rapidly increasing materials requirements of the war program make it impractical to continue the use of preference ratings which have been assigned under existing "P" orders to whole industries, without any exact check of the amount of material which such ratings may be used to obtain. Through the Production Requirements Plan, the director of industry operations will continue to assign ratings to deliveries of materials for essential uses, but the rating assigned in each case may be used to obtain only a specified quantity of materials or products.

Under the Production Requirements Plan, a company makes a single application for priority assistance covering all of its estimated materials needs over a three-month period. The applicant must submit full information as to his inventories, the end use of his products, etc. Priority ratings are assigned on the basis of such applications to permit producers of products essential to the war effort or minimum civilian needs to obtain specified quantities of materials during a quarter. Interim applications may be filed when a company needs additional quantities of material during the quarter because of increased war or other essential business.

A Modified Production Requirements Plan has been developed to meet the needs of small firms whose business is less than $100,000 a year. Such companies may use a simplified

(Concluded on Page 16, Column 1)

U. S. Auto Dealer Chief Lauds Firms Who Convert Showrooms To Machine Shops

MIAMI, Fla.—Conversion of automobile display rooms and repair shops into factories for the production of war materials will keep some 5,000 to 10,000 automobile dealers in business as well as give them an important war effort role, Cyrus McCormick, price executive of the automobile and truck section of the Office of Price Administration, said last week in a talk to the Automobile Dealers' Association of Miami, Fla.

Mr. McCormick cited 14 specific instances in which dealers averted closing their doors by converting their space and facilities to the production of small parts, vital in the war effort. He estimated that between 500 and 1,000 dealers of the nation's 44,000 had already converted to production of materials or were preparing to do so.

URGES CONVERSION

Mr. McCormick urged every dealer to consider the possibility of conversion and advised him "not to sit back and let the present emergency eliminate him from the picture.

"The dealer will be compelled to support his business on the operation of his shop and on the sale of repair parts—unless he can engage in war production."

A Columbus, Ohio dealer, Mr. McCormick reported, paved the road for the survival of other dealers by converting his showrooms and repair space into a technical school for the training of machinists and a factory for the production of small machine parts. This dealer now will realize a profit from the school as well as the factory, which will be manned by the graduate students of the school.

Mr. McCormick advised dealers to pool their resources, engage competent industrial engineers and legal assistance, as was done by 47 Pittsburgh dealers and 20 dealers in the Denver area and contact regional ordnance and procurement officials.

Machinery can be obtained with a little effort, Mr. McCormick said. "A dealer in the Baltimore area has secured between $80,000 and $100,000 in sub-contracts for small parts and is farming this work out to small machine shops in New Jersey and Connecticut. He has uncovered about 125 such shops with over 4,000 idle machines."

CITES EXAMPLES

Another dealer, Mr. McCormick reported, is using his entire repair shop force and some of his salesmen on three shifts of war materials work. Investments in new machines varied from $3,000 to as much as $30,000.

Mr. McCormick said that the converted dealers' plants are engaged in various types of production. One is plating bolts with cadmium. Another is manufacturing bronze shafts and bushings. Still another is producing steel shafts. Plane assembly tables are now being turned out in a showroom which formerly displayed luxury cars. Another showroom is now being used to turn out radio parts, and in still another fuses are made.

Janitor Supplies Given Trial By Dealership

NEW ORLEANS — Pitard Hardware Co., major appliance dealer here, has gone into sales of janitor supplies in downtown buildings to replace the loss of appliance revenue, according to Sidney Saucier, general manager, who has trained the three outside salesmen of the store to sell brooms, brushes, soaps, insecticides, and other building maintenance supplies.

Head Buffalo Group

These men in the electrical and appliance goods business in the Buffalo area will direct the work of the Electric Association of the Niagara Frontier as the officers of that group for 1942. Seated are Raymond W. Mitchell of Wipperman & Mitchell, Inc., president; and Robert D. Glennie, G-E Supply, vice president; standing, left to right, Richard Wahle, Johnson-Wahle Electric Co., treasurer; Weldon D. Smith, Adam, Meldrum & Anderson Co., executive committee member; Edward T. Ball, Joseph Strauss Co., Inc., vice president; and Samuel S. Vineberg, secretary-manager.

Big Stores Declare For Principle of Retail Sales Tax

NEW YORK CITY—For the first time in 21 years the majority of the members of the National Retail Dry Goods Association has indicated its support of a Federal Retail Sales Tax, to be advocated by the association at the present hearings on the Revenue Law of 1942.

Seventy-eight per cent of the voting members revealed their swing toward supporting a Federal Retail Sales Tax in a recently completed survey sanctioned by the Board of Directors of the association, in which Lew Hahn, N.R.D.G.A. general manager, and Jay Iglauer, chairman of the Taxation Committee, were authorized to send out a questionnaire to all voting members of the organization for the purpose of learning their views on manufacturers' and retailers' excise and sales taxes.

This support is based on the understanding that it carries a mandatory pass-on provision to be listed as a separate item and paid by the consumer to the retailer, and that it be in lieu of the manufacturers' and retailers' excise taxes levied under the Revenue Act of 1941.

Questionnaires were sent out on Jan. 26, and the poll closed at noon, Feb. 24. Of the four questions asked, the first three were voted on by a large majority of those replying, but the vote return on question four represented only about 65% of the total registered vote.

The questions and their answers in percentages are as follows:

Question 1—"Shall the N.R.D.G.A. advocate additional manufacturers' excise taxes?"

Yes—32%. No—68%.

Question 2—"Shall the N.R.D.G.A. advocate a general Federal Retail Sales Tax, with a provision that it be mandatory in all cases to pass the tax on to the public?"

Yes—78%. No—22%.

Question 3—"In the event of your favoring a Retail Sales Tax, or if Congress proposed to enact such a tax, shall the N.R.D.G.A. advocate a provision for the use of stamps in connection with such sales—the stamps to be retained by the purchaser and to become subject to an after-the-war refund from the government, to the extent of 50% of their face value (or some other percentage to be determined), as a means of creating purchasing power at that time?"

Yes—20%. No—80%.

Question 4—"In the event of your favoring Manufacturers' Excise Taxes, or if Congress proposes to enact such taxes, shall the N.R.D.G.A. advocate such taxes at high rates on specific commodities, or a general manufacturers' excise tax on all goods at a lower rate?"

In favor of a general manufacturers' excise tax at a lower rate—70%. In support of manufacturers' excise taxes on a specific commodities at higher rates—30%.

Care Needed In Selection and Handling of Added Lines, Say Dealers With Experience

Tricks In Choosing & Promoting New Lines Revealed

NEW YORK CITY—Expansion of service facilities and the addition of other lines of merchandise as means of helping appliance dealers weather the appliance drought were the topics given most attention at sessions of General Electric's Retail Development League Open Forum.

"Determine whether there is a need in your community for the new line which you propose to take on," several delegates cautioned dealers regarding adding new lines. "Look over your competition, talk with other retailers who are now handling the same or similar lines, find out everything you can about the line, and then if you think it still represents good business for you, make only a small investment at the start."

EXPERIENCE NEEDED

"If you don't know anything about the new line, it is better to hire someone who does," advised U. R. Ziesler of the Rahr Appliance Co., Monitowoc, Wis., who told delegates at the Chicago convention how he had bought out a small gift shop, moved the stock into his appliance store, and proceeded to hire the former owner to run his new gift department.

Mr. Ziesler described how he has added greeting cards and stationery, pictures and mirrors, a full line of kitchen furniture, and a complete array of kitchen housewares. His original investment of $900 in an infants' goods and furniture department now brings in a weekly sales volume of $125. Entirely unrelated but highly profitable, he reported, is his sideline of contracting for roofing and siding. But Mr. Ziesler still insists that he is running an appliance store.

BABY FURNITURE

Further proof of the popularity of baby furniture as a supplementary line in many parts of the country was furnished by Bob Shelley of Rich's, Inc., Atlanta, who declared at the New York forum that appliance dealers should take advantage of the rising birth rate.

Both conventions reported delegates who have successfully taken on phonograph records, record albums, and record cabinets during the past year. Often the ensuing "jitterbug" problem is solved by placing the record department in the rear of the store, in a separate room, or in an appropriate room in the basement.

Two delegates who handle records related that they have been able to line up contracts for servicing juke boxes with new and used records.

Reports by other delegates indicated that many specialty appliance dealers are developing into specialty houseware dealers handling a number of related lines so that they can stay in business despite shortages of appliances. Sewing machines, linoleums, paints, electric water systems, pottery and china, Pyrex ovenware, bicycles, toys, sporting goods, furniture, lamps and other lighting fixtures are numbered among the more popular new lines.

On the other hand, John Tribble of Washington, D. C., stated that he intended to remain an appliance dealer, rather than turn his display rooms into a "corner drug store." He intends to develop his service business to offset declining appliance sales.

SERVICE BUSINESS

Delegates at both conventions actively engaged in service work declared it is the backbone of their business and that through service they have been able to develop their appliance sales volume. A number of dealers said they started out in the service business, which later led them into appliance selling.

How to charge for service calls and whether to charge for testing radio tubes was widely discussed at both confabs. It was revealed that only in smaller towns do retailers make service calls and test radio tubes on a no-charge basis, their reason being that they knew everyone and had to render this personal goodwill service in order to protect their present and future business.

In larger cities most delegates reported that they charge a flat fee for each service call, and that a minimum inspection charge is made on radios whether the service man goes to the home or the customer brings the radio or tubes into the store. These dealers have little trouble in collecting for service, primarily because they let the customer know beforehand that there will be a minimum charge and that all service is on a cash basis.

Showroom Into a Shop, Salesmen To Servicemen

CHICAGO — Diversey Appliance Co., Frigidaire dealer, is converting its former showroom space into a refrigeration service shop. Morris Bloom, manager, intends to specialize in repairs of electrical appliances sold to apartment houses.

New Appliance Store Opens

WILLIAMS, Ariz.—A new furniture and appliance store has been opened by R. E. Mott at Third and Railroad Aves. in this city.

Philco N. Y. Distributorship Adds Bulbs To New Lines

NEW YORK CITY—Philco Distributors, Inc. of this city are adding the Wabash line of household electric light bulbs as a part of its policy of keeping salesmen on the job. It is believed that this line, if it proves successful, will be adopted nationally by the Philco organization.

Previously taken on by the New York distributor are the Elite and Concertone record lines.

The Wabash line was introduced to the salesmen by a tour of the Wabash Appliance factory in Brooklyn.

G-E Reports Many Appliance Distributing Firms Now Handle Electronic Tube Lines

BRIDGEPORT, Conn.—Many new distributors and dealers including several who have been engaged in specialty appliance distribution, are now handling electronic tubes, it was revealed at the "Electronic Tube College" held by General Electric.

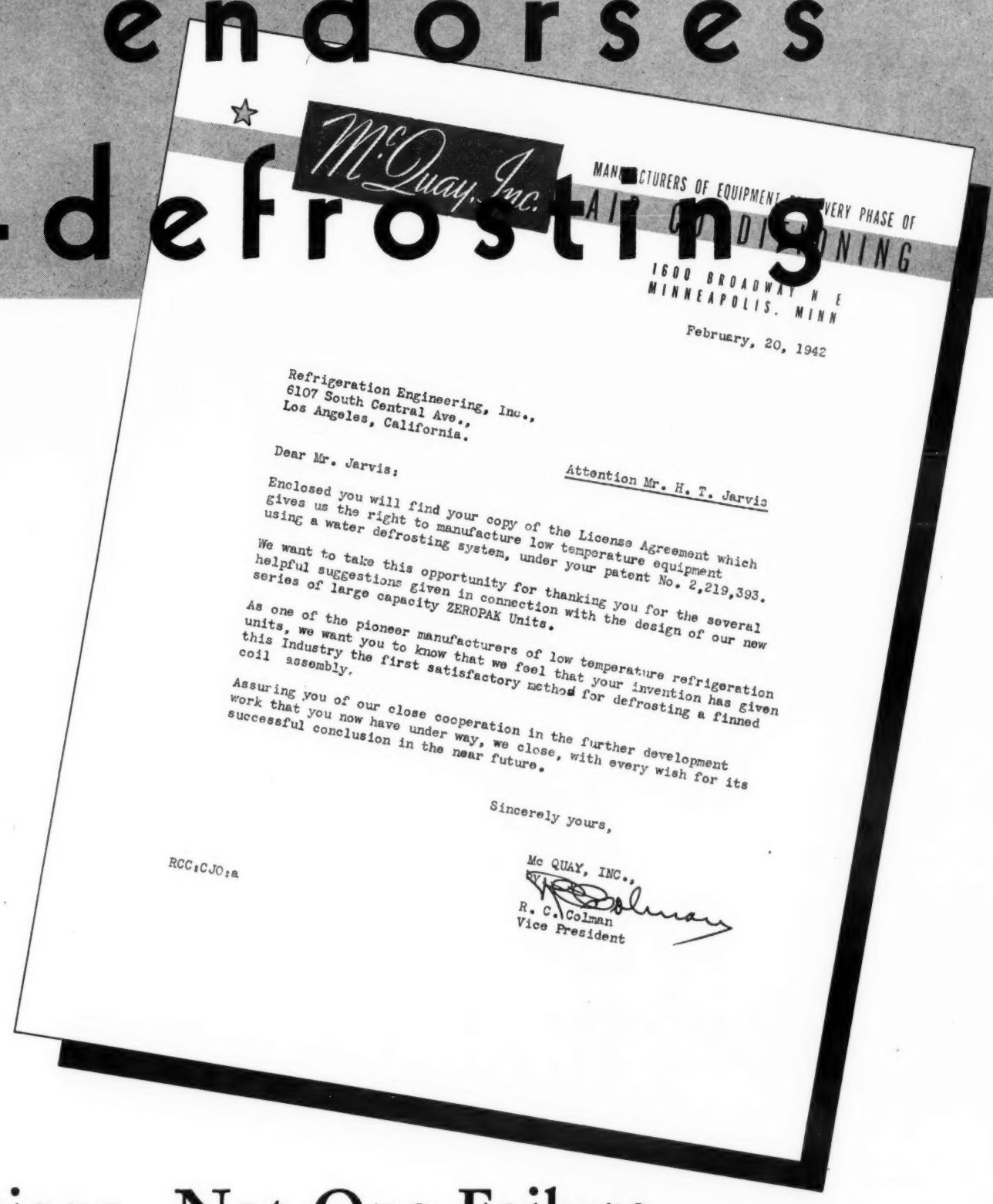
Previously G-E renewal tube distribution was handled by G-E Supply Corp. distributorships and some independent G-E radio distributors. Now the list of distributors includes these, and in addition, many more independent distributors, plus a new group of Schenectady distributor-dealers, plus a new group of apparatus sales agents.

Some of the specific uses of electronics, aside from the more commonly known uses in radio and television, were described by Everett E. Lee, G-E engineer as follows:

Controls for opening doors, leveling elevators, limiting motions, bringing out exact registering in printing presses, straightening cloth in textile machinery, controlling punch presses, timing welding operations to give exact performance, counting, calculating, lighting control, detecting metals, locating defects in metals, detecting smoke, and in many measuring instruments for measuring sound and vibration, color, light frequency, speed, thickness, pressure, temperature, turbidity, and in the field of medicine for diagnosis and healing, and to alleviate pain. Tubes used in these applications are very much like the vacuum tubes in ordinary radio receiving sets.

H. W. Bennett of the factory staff predicted to the field representatives that the government probably will make every effort to keep existing radio receivers operating inasmuch as radio is the only direct contact between the White House and the living room of the American home. Therefore, radio receiving and transmitting tubes will probably receive favorable priorities.

McQuay INC. endorses water-defrosting



Added Recognition of the Industry's Outstanding Achievement for Low Temperature Refrigeration

Over 12,000 Installations - Not One Failure

Water defrosting was developed, pioneered, and patented by RECOLD. Today this improved method of low temperature coil defrosting is sweeping the country. Manufacturers and men in the trade from coast to coast—and overseas, too—are using it to save hours of messy and expensive defrosting time and to save current costs. It works perfectly with all refrigerants.

There is no limit to the possible uses. Note a few of the many existing Water Defrost installations:

Airplane Mfg. Testing Lab.	—67° F.	Meat Freezing	—20° F.
Instruments for Stratosphere	—58° F.	Poultry Freezing	—15° F.
Blood Quick Freezing	—40° F.	Airplane Rivet Annealing	—10° F.
Quick Frozen Foods	—30° F.	Frozen Food Trucks	—10° F.
Geodetic Survey	—30° F.	Ice Cream Storage	—10° F.
Locker Plant Freezing	—30° F.	Poultry Storage	— 5° F.
Fruit & Vegetable Freezing	—30° F.	Fur Storage	— 5° F.
Fish Freezing	—25° F.	Blood Bank Storage	— 2° F.
Ice Cream Hardening	—20° F.	Ice Cream Trucks	0° F.
Bread Freezing	—20° F.	Locker Plant Rooms	0° F.
Migratory Fish & Game Work	—20° F.	General Storage	+15° F.
Quick Frozen Cooked Foods	—20° F.	Egg Storage	+27° F.

For your low temperature installations, insist on money-saving, trouble-free water defrost coils **MADE UNDER THE RECOLD LICENSE.**

Add McQUAY, INC. to your list of progressive coil manufacturers who recognize water defrosting evaporators as the ideal means of defrosting low temperature coils.

Follow the lead of the U.S.A. Armed Forces and specify WATER DEFROST Coils for all temperatures below +32° F.

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF CALIFORNIA
CENTRAL DIVISION

FILED March 9, 1942
R. S. Zimmerman, Clerk
By Murray E. Wire, Deputy

REFRIGERATION ENGINEERING, INC., Plaintiff, vs. ———— Defendants. — Civil Action No. 1982-BH — JUDGMENT

This matter having come before this court, and, upon representations of plaintiff and defendants, it appearing that defendant, ———, purchased from ———, a refrigeration coil device embodying the water defrost, the subject of Letters Patent No. 2,219,393 issued to plaintiff on October 29, 1940, ———, and that the entire transaction herein referred to was conducted after October 29, 1940, the date of issuance of said Letters Patent No. 2,219,393, and prior to the filing of the complaint herein:

NOW, THEREFORE, IT IS THE JUDGMENT OF THIS COURT THAT:

1. Letters Patent No. 2,219,393 granted October 29, 1940, to plaintiff, Refrigeration Engineering, Inc., are good and valid in law as to each of the claims thereof, and that title to the said Letters Patent resides in plaintiff.

2. That this action arises under the Patent Statutes of the United States and that this court has jurisdiction thereof.

3. That defendants, ———, have since October 29, 1940, and prior to the date of filing of the complaint herein, infringed Letters Patent No. 2,219,393, and each of the claims thereof by selling ——— devices embodying water defrost, the invention of said Letters Patent No. 2,219,393, after notice in writing given said defendants by plaintiff.

4. That the defendants, ———, their agents, servants, employees, attorneys, and those in active concert and participating with them be, and the same are hereby, perpetually enjoined and restrained from making, using, or selling, directly or indirectly, the invention the subject-matter of the said Letters Patent No. 2,219,393, ———, be perpetually enjoined and restrained from making, or causing to be made, selling, or causing to be sold, using, or causing to be used, directly or indirectly, water defrost devices for refrigerating coils, and that a writ of injunction issue under the seal of this court directed against said defendants, ———.

DATED this 9 day of March, 1942

Ben Harrison
United States District Judge

The foregoing is a partial quotation only of the stipulated judgment entered March 9, 1942.

REFRIGERATION ENGINEERING INC.

RECOLD

LOS ANGELES — CALIFORNIA

Licensees:

BUSH MFG. CO. Hartford, Conn.

KRAMER TRENTON CO. Trenton, N. J.

McQUAY INC. Minneapolis, Minn.

Priorities Information

Text of Official WPB Release on Proposed Distributor Priority Plan

WASHINGTON, D. C.—"Priority problems of distributors, wholesalers, and jobbers will be simplified by the use of a new application form which has been designed for their special use," says an official War Production Board release. "The new form, to be known as PD-1X, will be available soon after the first of April." (Refrigeration supplies are one of the classifications in the proposed order.)

"Insofar as materials and supplies can be made available without interfering with the war effort, priority assistance will be given to distributors, wholesalers, etc., who apply on the new form so that they can keep sufficient stocks on hand to maintain essential productive and service industries in operation," the release states.

"In recent months, distributors have been hesitant to make deliveries to retailers, restaurants, and other important users who cannot furnish priority rating certificates, because the distributors were afraid that they would not be able to replace the material in their own inventories. Use of the new form will enable distributors to request preference ratings for essential supplies without receiving or extending a rating on every individual order which they fill.

"Distributors, wholesalers, and jobbers who purchase the following supplies from producers will be entitled to apply for preference ratings on Form PD-1X:

Automotive Supplies
Aviation Supplies
Builders Supplies
Construction Supplies
Electrical Supplies
Foundry Supplies
Hardware Supplies
Health Supplies
Industrial Supplies
Plumbing and Heating Supplies
Railroad Supplies
Refrigeration Supplies
Restaurant Supplies
Transmission Supplies
Textile Mill Supplies
Welding and Cutting Supplies

"Distributors who use Form PD-1X will be required to furnish information on their sales and inventory of the types of material for which priority assistance is requested. Ratings will be assigned on the basis of the importance of the product, the use to be made of it by the distributors' customers, and the availability of the materials required.

"Distributors should also furnish information showing the percentage of material shipped out of stock on rated orders during the preceding month or second preceding month, as compared with total sales, if such information is available. The distributor should also give any pertinent information as to where he sells the products he distributes, such as: to retail stores serving farms; to workers using tools in defense plants, etc. Where need is based on seasonal demands, the distributor should show his seasonal purchases in 1941 as a basis for his application.

"A uniform system for assignment of ratings will be developed in cooperation with the various industry and materials branches concerned so that all distributors handling the same types of products for the same classes of customers will receive similar ratings.

"Use of the new form is not expected to cover all of distributors' requirements for priority assistance. When a distributor fills an order bearing a priority rating for a substantial quantity of material, he should extend the rating to his producer instead of applying for a new rating on Form PD-1X. The new form is intended rather to enable distributors to keep their inventories of parts and products sold in small quantities up to a practicable working minimum.

"For example, a distributor of hardware supplies to retailers in a Defense Housing critical area may receive a large number of small orders for hammers and other hand tools which will be used by workmen engaged in defense housing construction, but it would be difficult or impossible for the retailer to furnish him with a priority rating on each order. In such a case, the distributor could apply for priority assistance to replenish his inventory by using PD-1X, and the required priority assistance would probably be granted. Use of Form PD-1X will also help the War Production Board to obtain detailed information about distributors' inventories and to control the flow of essential materials through them.

"A new order, to be known as L-63, limiting the size of inventories which may be maintained by distributors, will be issued and published before the new PD-1X forms are made available for use, and the quantities of items for which priority assistance will be granted on the basis of PD-1X applications will be subject to the terms of this order.

"After the new forms become available, distributors, wholesalers, and jobbers will be required to use them exclusively in applying for priority assistance. When a rating or ratings are authorized in connection with a PD-1X application, they may be applied on distributors' orders to producers by a simple form of endorsement on the purchase order containing the serial number of the approved application.

"Ratings authorized for specified quantities of materials may be applied to more than one purchase order placed with different suppliers, provided that the total quantity to which the rating is assigned is not greater than the total amount authorized.

"Suppliers and producers to whom the rating is extended in this way may re-extend the rating to obtain materials which will be physically incorporated into materials or products to be ultimately delivered to the distributor in accordance with the terms of the certificate."

Priority Reports Are Simplified by Cutting Of Number Required

WASHINGTON, D. C. — Reports required by the War Production Board in connection with priority orders have been reduced by eliminating the requirement for submitting such reports from a substantial number of orders.

Priorities Regulation No. 8, issued by the Director of Industry Operations, provides that all orders which require reports to be made on any of the 43 PD forms in the attached Appendix "A" are amended to eliminate that requirement, except for a few general preference rating orders which are listed in Appendix "B." The forms which have been eliminated all have to do with the application of preference ratings assigned by "P" orders.

Regulation No. 8 is the first step in a move to eliminate all unnecessary or duplicating reports. The report forms which remain in use are being carefully studied, and an effort is being made to find others which can be eliminated.

944.29 Priorities Regulation No. 8.

(a) **Certain Reporting Requirements Revoked.** Except as provided in paragraph (b) hereof, all orders heretofore issued which require any person to report upon any of the forms listed in Appendix A to this Regulation are hereby amended so as to revoke such requirements.

(b) **Exceptions to General Rule.** The provisions of paragraph (a) hereof shall not apply to any of the orders listed in Appendix B to this Regulation.

(c) This Regulation shall take effect immediately.

Appendix A. Reports on the following forms need no longer be filed, except to the extent required by the orders listed in Appendix B:

FORMS PD—

6	41	45	52	63	74
6A	41A	45A	52A	63A	74A
13	42	46	56	64	81
14	42A	46A	56A	65	81A
30	43	47	57	68	93
30A	43A	47A	57A	68A	119
38	44	48	58		
	44A	48A	58A		

Appendix B. When required by the following Orders, reports on the forms listed in Appendix A shall continue to be filed:

ORDERS P—

19	29	51	73	87
19-a	42	56-a	82	95
19-e	42-a	62	86	115
19-h	43	65		
		68		

Steps To Follow In Using PD-3A Form On Gov't Orders

WASHINGTON, D. C.—The PD-3a certificate, which replaced forms PD-3, PD-4, and PD-5 and became mandatory March 15 on all priority orders emanating directly from government agencies, is simple to use and extend, but a certain form must be followed.

The PD-3a certificate will be extended to the prime contractor by the governmental agency in the same manner that the former PD-3 certificate was extended—the prime contractor will be given a certificate covering the material called for by the prime contractor.

The similarity between the old and the new methods ends at this point, however, as the prime contractor will retain the PD-3a certificate so issued, and extend the preference rating by the following certification on his purchase orders, or rider attached thereto:

"The undersigned represents to the Director of Industry Operations that Preference Rating ..... is hereby applied pursuant to Certificate PD-3a Serial No. ..... and initiation Government Agency (ies) ..... Contract No. (s) ..... placed with Prime Contractor, in accordance with Priorities Regulation No. 3, with which I certify I have complied. The person extending this rating must send a certified copy of his purchase order to ..... or, if purchase involves several orders to the inspector named on the order having the greatest values.

.....
(Address)
.....
(Date)
.....
(Name of Purchaser)
.....
(Signature and Title of Official)

Any person extending the Preference Rating must send a copy of his certified purchase order to the issuing officer, whose name appears on the original certificate, or in the certification on the face of a purchase order received by him.

Extensions of the procedure as outlined here are limited to material which will be physically incorporated into the material covered by the prime contract. Extensions for materials which will not be physically incorporated will be rejected and this point must be kept in mind.

Extensions of the Preference Rating pursuant to PD-3a are not limited to $500 valuation on material and need not be countersigned by an Army, Navy, etc. official.

Executive To Handle Priorities Profitable To Firms Using Plan

NEW YORK CITY—The handful of companies here who have sought to establish an effective system for meeting priority problems by naming executives to over-all positions of authority to adjust company policies with priority realities has found it highly profitable, Stanley G. Oppenheim, consulting analyst for the Priorities Field Service's regional office here, declared.

Where companies are fully conversant with the details of priority rulings affecting their industries, Mr. Oppenheim said, they are more likely to convert to war industries before unsuspected results of such rulings get their businesses into hopeless confusion.

"In a single industry there may be as many as 30 or 40 priority orders already issued which affect the industry vitally," he pointed out. "Often the orders are considered remote from the affected industry, as in the instance of a pigment going into the finishing material surfacing a prefabricated part for a motor which the producer of an appliance purchases.

"A priorities vice president would check through each order already issued and through subsequent orders as they are issued and determine where, if at all, they would affect his company. Acting on his knowledge of the effect of other orders on other departments of the company, he would be able to recommend a policy change intelligently. But a purchasing agent responsible only for getting the motors might have no knowledge of an order affecting distribution of the company's product."

Steel Companies Must Follow Priorities In Filling All Orders

WASHINGTON, D. C.—War orders for steel must be produced in proper sequence of preference rating regardless of the product involved, presidents of the nation's steel companies were informed on March 10 by C. E. Adams, chief of the Iron and Steel Branch, War Production Board.

The letter was as follows:

"Your attention is called to paragraphs (b) (4) and (b) (10) of General Preference Order M-21, quoted in attached memorandum.

"In order that there may be no misinterpretation of these paragraphs, it must be definitely understood that Defense Orders must be produced and shipped in proper sequence of preference ratings, regardless of the products involved; for example, a sheet or pipe order bearing a lower rating must not be produced before a higher-rated bar or plate order requiring the same delivery, unless the bar and plate mills in question are operating at the greatest possible capacity.

"To accomplish this in the interest of the war effort, it is necessary to apply the preference rating system, beginning with the ingot production of each producer and see that it is followed strictly in all subsequent operations, in the absence of contrary instructions from the Director of Industry Operations. In other words, your finishing mills carrying high preference ratings must be provided with steel to insure maximum operation, regardless of the fact that you may not then be able to assign steel for the production of lower-rated products."

Priority Information (Cont.)

WPB Outlines New Requirements In Filing PD-25A Forms For Second Quarter

WASHINGTON, D. C.—A revised form of application for priority assistance under the Production Requirements Plan has been mailed to all companies now using the plan, to be used in filing their applications for the second calendar quarter of 1942. Copies of the revised Form PD-25A are available in WPB field offices or in the Production Requirements Branch, Bureau of Priorities.

The changes are largely technical, including requests for some additional information, and are designed both to assist the WPB in determining the materials requirements of American industry and to facilitate a more accurate assignment of ratings under the Production Requirements Plan. The plan remains as before a method by which companies handling a substantial volume of war or essential civilian orders may obtain priority assistance covering their materials requirements over a calendar quarter by filing a single application.

REPORT UNFILLED ORDERS

Most important of the changes in the form is that unfilled orders on the applicant's books as well as past shipments are to be reported, and will be taken into consideration in the assignment of ratings for specific quantities of materials for which priority assistance is granted. Consideration has previously been given to unfilled orders when supplementary applications have been submitted for re-rating or rating on additional requirements, but not on the initial rating to cover the whole quarter. The change is embodied in Section D of the application form.

BREAKDOWN BY CLASS, RATING

Applicants are now required to show in Section B of the form a breakdown of shipments by classes of products and priority ratings. That is, an application covering two classes of products should show the volume of shipments of each class shipped on orders bearing ratings between AA and A-1-k, between A-2 and A-9, A-10, other ratings and no ratings at all.

The data on shipments to be submitted on the new form should cover the most recent three months for which figures are available, instead of the most recent calendar quarter. In no case should the figures be for any period earlier than the quarter ended Dec. 31.

END USE DATA

In Section D, Part 1, applicants are advised to show separately on line 23 or 24 their unrated shipments of repair or replacement parts, since special consideration will be given to such shipments in determining the volume of materials for which the applicant is entitled to a rating.

In Section D, Part 2, "Classification of Shipments by Industry or End Use," special lines are provided to show shipments destined for the Army, Navy, Maritime Commission, aircraft, or machine tools. A line in this section is also provided to show shipments to distributors, wholesalers, etc., but shipments made direct to consumers should not be included on this line even though the customer's order was handled by a distributor.

Applicants are warned that the figures in Section E, column 8, should be estimates of the total amounts of materials which will be used during the quarter, whether from inventory or new receipts, and not estimates of materials to be purchased during the quarter.

Maintenance, repairs, and operating supplies purchased in one of the forms listed in the Materials List No. 1, which accompanies PD-25A, are to be reported in Section E. Other maintenance, repair, and operating supplies are to be reported in Section G. The line in Section G, "Total (Maintenance, Repair, Operating)" means total other than amounts reported in Section E.

MATERIALS NEEDED

A new page Section E and F Supplement, gives the applicant an opportunity to break down his report of materials requirements, as shown in Section E and Section F into the amounts of such materials required for making each class of the applicant's products. This breakdown is not required of applicants whose bookkeeping methods do not permit the necessary analysis, but if it can be furnished it will be helpful both in furnishing information to the War Production Board and in making it possible for a more accurate assignment of ratings to the applicant.

In addition to filing Form PD-25A, applicants for priority assistance under the Production Requirements Plan must send an accompanying letter. If any of the materials included in the application is affected by a conservation or limitation order, the letter must include the following information concerning the use of these materials:

WHAT LETTER MUST TELL

1. Part in which material is incorporated, product into which part enters, and use of product in which material is incorporated, or purpose for which material is used.

2. Substitutions accomplished to date, amount of material saved per month compared with former consumption, further substitutions anticipated or reasons why no substitutions can be made including specifications number of Army or Navy.

3. Form, grade, type, or alloy of material.

In making use of the ratings assigned to him under the Production Requirements Plan, a producer must make out a separate purchase order for each rating used. That is, if he is granted use of an A-1-c rating for a certain amount and type of material, and an A-8 rating for another amount and type of material, he must use separate purchase orders even though both orders may be placed with the same supplier.

FORM FOR SPECIAL RATINGS

An amendment to the Production Requirements Plan Order, P-90, announced recently and incorporated in the revised Form PD-25A, allows a company operating under the plan to use ratings other than those assigned on PD-25A to obtain "as required" or "special order" materials not ordinarily carried in stock, without any special permission from the Director of Industry Operations. AA ratings may also be extended by the company without special permission, but any producer operating under the plan who makes use of these other ratings must report such use on Form PD-25G at the end of each month. Form PD-25G is now being printed and will be available in two or three weeks.

PD-25F BEING REVISED

A revision of Form PD-25F, used to make interim appeals for higher ratings than those assigned on the basis of the original PD-25A application, or appeals for greater quantities of materials needed because of new orders received, is being prepared and will also be ready in the near future.

Companies operating under the plan which need interim assistance urgently may submit the information required by Form PD-25F by telegraph, or telephone, to the Interim Assistance Section of the Production Requirements Branch, War Production Board, and receive telegraphic authorization when justified within 24 hours.

Copper Mines Finally On a 7-Day Week

WASHINGTON, D. C.—Copper mining operations have been put on a seven-day week basis according to announcement by Sidney Hillman, labor director of the War Production Board.

"An adequate supply of copper is crucial to effective prosecution of the war. The whole copper mining problem has been one of the most complex and difficult faced by the government. This program should do much to solve it," Mr. Hillman said.

The plan also provides for "improved working conditions and labor-management advisory committees," the report said. A detailed check will be made to see that this policy is followed.

A-10 Is Granted on Plumbing, Heating Repairs In Residential Applications

WASHINGTON, D. C.—Issuance of an order designed to facilitate the maintenance and repair of existing plumbing and heating installations in farms, residences, and office and apartment buildings was announced late last week by J. S. Knowlson, Director of Industry Operations.

The order (P-84) assigns an A-10 preference rating, which may be applied by an installer or supplier, to materials needed for emergency plumbing and heating repairs. The rating may not be applied, however, to obtain copper already fabricated in sheets, wires, rods, or tubes or to any scarce materials which can be eliminated by change of design or by substitution.

W. Walter Timmis, chief of the Plumbing and Heating Branch said:

"The importance of maintaining existing plumbing and heating facilities is recognized in this order, but because the plumbing and heating industry is chiefly a metal consuming industry, every effort must be put forth to keep consumption of critical materials at the irreducible minimum.

"In other words, this order is not a guarantee that existing plumbing and heating facilities will be maintained in exactly their present state. For instance, a heavy brass chrome plate shower mixing valve would not be replaced by one of the same type. In normal times it has often been found that it is cheaper to replace than to repair.

"Replacement now can be made only if there is no possibility of repair. In cases where replacement is essential it will be found that the items now being produced are severely limited in number of types and styles, that the weight has been reduced, and that in many cases, less critical materials are being used in place of the customary materials."

The order defines plumbing equipment as any equipment, fixtures, fittings, pipes, accessories, or supplies of types used in, or connected to, water, sewer, or gas systems, whether or not connected with a central system. It does not include however, any tools for use in installation of repairs, or any hoses, sprinklers, or other device commonly attached to outdoor faucets.

Heating equipment is defined as any primary heating unit used to provide building warmth or any accessories of such unit.

Emergency repairs are defined as those required by actual or imminent break down of plumbing or heating equipment. It includes the emergency replacement of equipment which is worn-out or damaged beyond repair. It does not include installation of superior type equipment or substitutions more extensive than required to replace worn-out parts.

Other provisions of the order are:

1. The A-10 rating may be applied by a simple endorsement on purchase orders or contracts.

2. Installers may not apply the rating to obtain delivery of materials on earlier dates than required to enable them to make emergency repairs.

3. A supplier may not apply the rating if he can make his delivery and still maintain a minimum working inventory.

4. The A-10 rating is applied automatically in the case of delivery to an installer of any plumbing and heating item, the cost of which is less than $5, provided that the total order placed by the installer is less than $10.

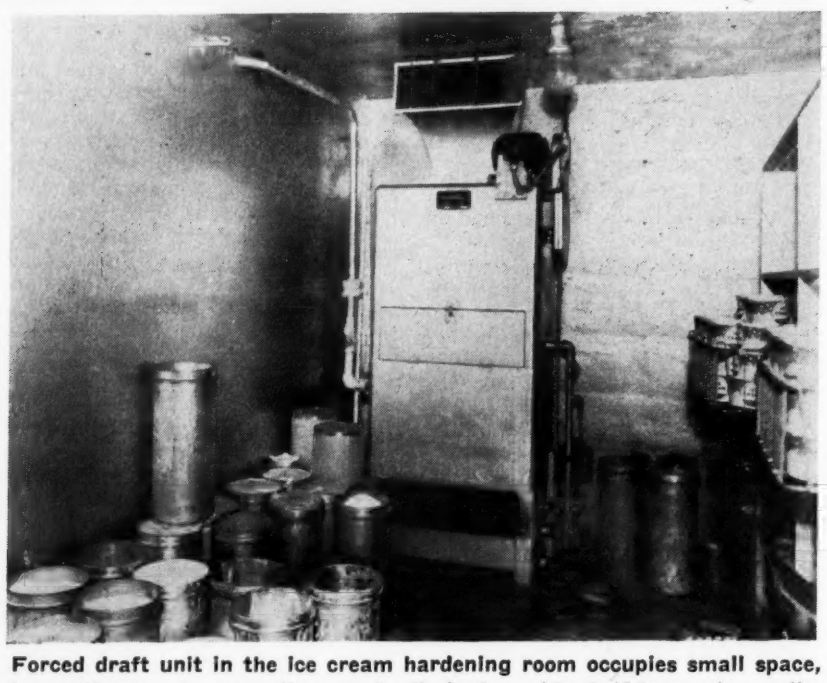
"Such deliveries," Mr. Timmis stated, "to which the rating is automatically supplied must be actual and **bona fide** purchases for less than $5. Similarly the overall order must be for less than $10. Larger orders may not be broken down so as to bring them, by subterfuge, within the terms of this provision."

5. In the case of units costing more than $50, and worn-out or damaged beyond repair, the installer must attach to the purchase order a statement signed by him and by the ultimate user, certifying that repair is impracticable, and specifying the points at which the unit failed.

Order P-84, says the announcement, is designed to fill a gap in the application of orders currently existing for repair and maintenance needs. Preference Rating Order P-100 for instance, assigns an A-10 rating for repairs and maintenance items but may not be used to secure repairs for retail or residential properties.

The new order, although making the A-10 rating extendible to all suppliers, including the manufacturer, does not permit the manufacturer himself to extend the rating.

Blower Units Do Complete Refrigerating Job For Ice Cream and Dairy Plant



Forced draft unit in the ice cream hardening room occupies small space, is continuous in operation, and eliminates old shelf-type pipe coils.

* * *

WOODLAND, Calif. — A forced-draft Niagara unit for hardening ice cream and the Niagara dual sweet water cooler for cooling milk products have been installed in the new $30,000 Sanitary Dairy plant here operated by Frank and Leslie Morris.

Installation of the Niagara unit in the sharp-freeze room insulated with 6-inch corkboard was simple, the brothers report. Fans are driven by a 1-hp. motor located in the hardening room. The unit has a 1-hp. directly connected spray pump which pumps a defrosting solution through the sprays and over the cooling coils.

As the solution is diluted it is automatically pumped to the concentrator which is located in the engine room. There the water or moisture is boiled out to the drain, while the defrosting solution is returned to the spray cooler. Thus, the operation is continuous and becomes automatic, requiring very little attention.

FASTER HARDENING

Ice cream is now hardened in less than 12 hours, making the daily ice cream capacity of the new plant about 300 gallons. The new type equipment provides unobstructed space for storage which the old plant did not have because of the use of coils. This equipment uses chilled air recirculated by a spray cooler. The sprays are kept from icing the coils by the use of no-frost liquid, as the water condensed from the air is removed from the spray liquid by a concentrator of the electric type with automatic control.

The plant is said to operate at much higher suction temperatures than with the conventional type coils of the shelf type that were used in the old plant.

With a Niagara dual cooler to cool the milk room and to provide chilled sweet water for the milk cooler, the milk is brought to the new plant between 5:30 and 6:30 a.m., and by 1 p.m. it has been processed and delivered to local consumers.

36° STORAGE ROOM

The dual cooler cools the milk storage room to 36° F., while providing cold sweet water to cool 3,000 pounds of milk per hour from 85 to 38° F. Arranged for full flooded operation, this unit is equipped with a fan motor circulating 3,000 c.f.m. The refrigerant temperature is maintained at 28° F. by means of a suction pressure regulator. There is no frosting of the coils, meant to give full capacity and save power.

With the bottler located in the pasteurization department, milk enters the depot at the north end, travels on a conveyor to the testing and weighing unit, and is poured into a vat where it is piped to the two big pasteurizers, where it is pasteurized at a temperature of 143° to be piped into a nearby cooler where it stays until it reaches a temperature of 40°. From there the milk proceeds to the bottler and is rolled into the main refrigerator to await delivery.

Fiberglas Product For Low Temperature Jobs Made In Block Sizes

TOLEDO—Claims being made for the new AE (asphalt enclosed) board for low temperature insulation work just introduced by Owens-Corning Fiberglas Corp. (see announcement in the March 23 issue of the NEWS) apparently make it equal to, and in some respects superior to, the scarce insulating material for which it is being substituted.

AE board is constructed of pure glass fibers, compressed to a density of 6 pounds to the cubic foot, and completely enclosed in a sheath of asphalt that has a high melting point. Its conductivity factor is 0.265 B.t.u. at 60° F.

RESULTS OF TESTS

While Fiberglas has been used as a medium and high-temperature insulation for some time, its development for low-temperature work presented a problem in the necessity of reducing moisture penetration to an absolute minimum. Fiberglas officials state that tests on this factor demonstrated the following:

After being completely immersed in water at 78° F. for 196 hours, the AE Board showed a gain in weight of 90.5%. Similar tests on several other low-temperature insulation materials showed gains in weight ranging from 64 to 261%. When exposed in a humidity cabinet at 70° F., and 65% relative humidity, the moisture pick-up from previously dry conditions was 0.064% by weight.

SIZES OF BOARD

The new insulation board is made in the "American Standard" size for refrigeration insulation—12 by 36 inches—and in thicknesses of 1, 1½, and 2 inches. Blocks are formed with square edges and corners, and the asphalt coating is thoroughly sanded to prevent adhesion of the blocks to one another during shipment or while in storage.

The asphalt coating is said to provide a substantially waterproof seal completely around the Fiberglas insulation. It also increases the stiffness and rigidity of the insulation so that the blocks can be used for the erection of self-supporting partitions, or as load-bearing insulation to carry floors in refrigerated spaces. It is also said to have a high resiliency.

EASILY ADAPTABLE

Lightness in weight is another feature claimed, and this is declared to make the board easy to handle and readily worked for application to areas of irregular shape.

All special-size pieces can be made up on the job by cutting the board to size, and sealing the cut edges with hot asphalt. The material can be sawed with an ordinary wood saw if the blade is frequently lubricated with kerosene to pevent the asphalt coating from gumming the teeth.

For curved surface of large radii, the board can be slotted on one face and bent to fit the required curve.

Immunity to rot, decay, and fungus growth are other characteristics said to be possessed by the AE board, and its makers say it is regarded as a fire retardant. It is odorless in low-temperature service and will not absorb odors. It is further said to be vermin and rodent proof.

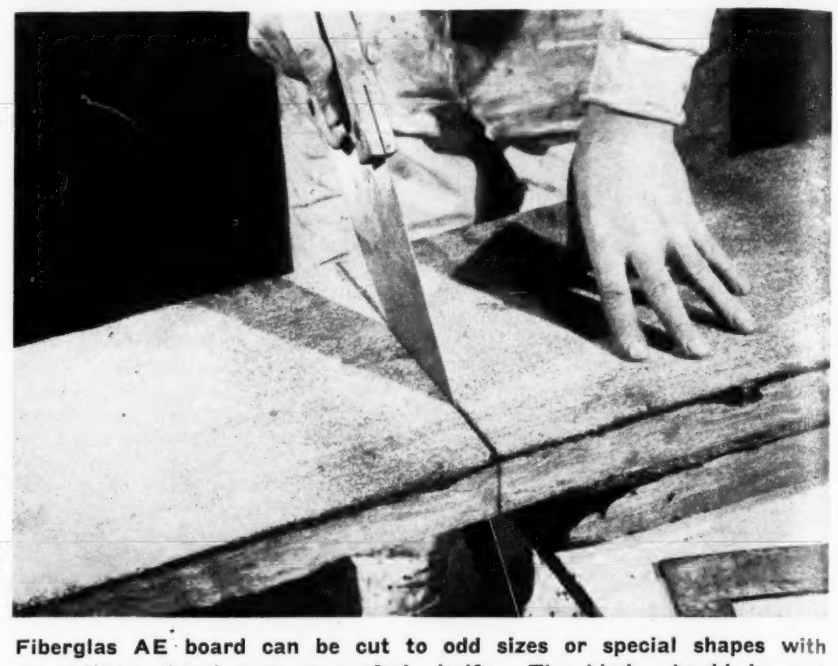
'Freon' Low Temperature Technical Data Printed

WILMINGTON, Del.—An 8-page folder of tables giving the physical and thermodynamic properties of "Freon-12" liquid, saturated, and superheated vapors through the range of —30° to —155° F. is now available from Kinetic Chemicals, Inc.

This data was prepared when it became evident that low temperature refrigeration would have many important and vitally necessary applications in modern industrial work, and that there would thus be a need for additional complete and accurate information to facilitate calculations for the design and construction of suitable equipment.

Readers may obtain copies of the data at no charge by addressing Kinetic Chemicals, Inc., Wilmington, Del.

New Insulation Board Is Workable, Has Structural Strength



Fiberglas AE board can be cut to odd sizes or special shapes with an ordinary hand saw or roofer's knife. The blade should be wet with kerosene to prevent gumming by asphalt.

In application the board is pressed into position against the wall or ceiling surface, before the asphalt cools. The second and all subsequent layers are skewered to the preceding layers by driving home the skewers previously started. Note that all joints are staggered with respect to each other, both vertically and horizontally.

Farm's Refrigeration Facilities All-Inclusive

NEWFANE, N. Y.—Indicative of the business-like manner in which the produce farm-of-the-future is likely to be conducted is the newly constructed utility building at Churchill Farms, operated by Clinton H. Churchill here. In addition to refrigerated storage, the utility building also provides complete facilities for handling both farm and market accounts.

Included are a packing and grading room, a killing room for poultry and turkeys, an apple storage room, a poultry cooling room, a sharp freezer for produce and meat storage, a dry storage room for cabbage, potatoes, etc., and a small office for keeping the farm's accounts.

Apple storage room will hold approximately 5,000 bushels. Floor, walls, and ceiling are insulated with Armstrong corkboard; 3 inches thick on the floor, two 2-inch layers in the walls, and one 3-inch and one 2-inch layer in the ceiling.

Case Firms Will Make Prefabricated Houses

ST. LOUIS—Two St. Louis commercial refrigerator firms, the Hussmann-Ligonier Co. and the National Refrigerators Co., have been awarded contracts for construction of 1,300 prefabricated, demountable defense houses.

The contract to Hussmann-Ligonier is said to call for 1,200 houses at a cost of $3,574,473. The National Refrigerators contract is said to be for 100 units, costing $191,394.

How To Improve Service

Milwaukee Group Suggests Ways Of Bettering Appliance Service

MILWAUKEE — Recommendations for improving appliance service departments have been drawn up by a committee here which included representatives from the Wisconsin Radio, Refrigeration & Appliance Association, the Servicemen's Union, and the local utility company.

After a very thorough discussion the committee decided not to sponsor any kind of an air tight plan by which the dealers would be required to meet fixed qualifications, and then be given a decalcomania sign indicating that it was a certified service shop, in the fashion of the plan that is in use in some other cities.

The recommendations call for standard prices or charges without specifying them exactly, although they had been suggested in the first meeting of the committee as $2 minimum per call in the appliance field, $1.75 as the minimum price of a service call in radio; and $2 per hour minimum shop rate.

Declared the committee report:

"Members of the committee discussed two methods of approach:

"(1) To set up a plan that would require service departments to meet definite and fixed qualifications and then issuing to them a decalcomania sign designating them as approved or certified service shops.

"(2) To set up a more simple plan covering basic requirements and broadcast it to members of the industry as a recommendation from the committee, leaving it to the individual distributor or retailer to use it to whatever extent he might see fit.

"The committee recognized and considered the advantages that would accrue to the better type of service operation by adoption of a plan where a certified sign be given those who qualify. A fine program of this kind is underway in the city of New Orleans, under sponsorship of the Electrical Association of New Orleans. The New Orleans plan not only requires dealers to meet definitely established qualifications, but provides for training of servicemen, etc. Those who qualify are given an attractive decalcomania sign. While such signs to cover the requirements in Milwaukee County could be purchased for approximately 36 cents each, our committee came to the conclusion that their use would not be of great value unless supported by a consistent, collective advertising effort to sell the public on the fact that it would be advantageous to patronize these certified dealers. Under present conditions, it was felt by the committee that it would not be possible to finance such advertising.

"The question of sponsorship of a certified sign also appeared as a difficult problem. It would be difficult for the Association to sponsor distribution of such signs because there are many dealers, with good service organizations, not belonging to the Association. It was felt that it would be unfair for the Association to limit certification to its own members and, on the other hand, that it would be unfair to our members for the Association to issue certified approvals to dealers who do not support the Association.

"In support of the committee's decision to follow the No. 2 plan, there seemed to be a rather unanimous feeling that the need of converting service departments into profitable operations would shortly be so urgent for many institutions that policing of a program will be unnecessary. The necessity for survival will be sufficient policing.

Standardized Service Technique

There are five recommendations along this line, as follows:

1. A uniform approach and service equipment in making service calls, that is, a tool kit containing tube checker and tools clipped or neatly arranged with the idea of selling the customer by a favorable first impression. A uniformed or absolutely neat serviceman comes first in making that impression. Where the public can view the men working, the service bench should be neat and clean. Part of the tool kit should consist of touchup, refinishing, and polishing materials.

2. Standardized billing and complete listing of all work done. A standard warranty should be given on all service. (See suggested forms attached.)

3. Standard prices such as per the R.M.S. plan, with a fixed minimum price for a service call.

4. Service engineering sheets and information to be released from time to time using the cooperation of the distributors to the fullest.

5. Retail dealers should take advantage of the plans being offered by their manufacturers and distributors. Several of these are already available.

Standardized Service Selling

Recommendations for the standardized selling technique are more difficult because of the human elements involved, but the committee offers these recommendations:

(1) That service inquiries, either telephone calls or personal calls, be handled by responsible people who know selling technique. Selling service is little different from selling merchandise and its importance now becomes such that it should not be entrusted to telephone operators or inexperienced clerks.

Data given to the committee showed that a test made on a selected number of telephone service calls at one institution resulted in a capable salesman getting service jobs out of more than 50% of a selected number of telephone calls, whereas not a single job resulted where a similar number of calls were handled by an untrained telephone operator.

(2) The committee presents the following suggested method of handling a telephone service inquiry, as suggested by Milton Peters, secretary of the Servicemen's Union, who is himself an experienced service man. The technique suggested by Mr. Peters is roughly outlined as follows:

Make of radio or other appliance. (Don't forget to comment on the fact that it is an exceptionally fine (whatsis) make)

Model if possible. (Don't give price on call yet)

Location (apartment number, etc.) Address (not yet on price)

Name. A good suggestion is to ask how to spell the last name (people will do this before they tell you their name). (No price is given yet)

Complaint. After customer names, try to get additional information, if set fades, etc.

Describe your service. We check tubes, aerial, ground, voltages, and speaker in the home, repair any minor troubles and tighten up any loose connection. Our service man happens to be well acquainted with your type of set and is equipped especially for service on it. He will check all these things in your home and the price for this service is only $ ..... (name established price).

When will it be most convenient for you to have him call?

Standardized Billing Essential

The committee believes that one of the most essential factors in accomplishing the purpose of this program is the adoption of standardized billing forms by all service shops. Accordingly, there is attached to these recommendations, two samples of standardized billing forms, one for radio repair service and the other for service on refrigerators or other major appliances.

Suggested Form for Other Appliances

(Company Name and Address Here)

ADDRESS — APT. — DATE
TENANT — ORDER NO. — PHONE
OWNER — ADDRESS

Model	Product	Serial No.	Model	Product	Serial No.
.....	Refrigerator	.....	.....	Washer	.....
.....	Gas Range	.....	.....	Ironer	.....
.....	Electric Range	.....	.....	Space Heater	.....
.....	Com. Ref. Unit	.....	.....	.....	.....

Date Sold ....., 194.. Purchased From .....

SERVICE REQUESTED:
WORK DONE
User advised as follows:

SHOP WORK	Amt.	Part No.	Material Used	Price
O.K.'D				
CHECKED				

PARTS
Hrs. Labor @ LABOR
(Min. Labor Charge $) TOTAL CHARGE

THIS IS YOUR INVOICE—PLEASE PAY SERVICE MAN
SERVICE ORDER NO.

Service Man — Customer's Signature

Service Man's Mileage Check Sheet

Mileage Record of	Reading	Arr.	Place	Ticket No.	Leave	Miles	Time

Remarks

Standard Radio Check Sheet & Invoice

(Company Name and Address Here)

We use genuine replacement parts and tubes whenever possible. We warranty our service and parts used for ninety (90) days from time of delivery.

Name ..... Date .....
Address ..... Make .....
Model ..... Serial No. ..... Code .....
Complaint

		OK	NG	Price
Tubes				
Condensers	Filter			
	By-pass			
	Misc.			
Voltages				
Aerial and Ground				
Resistors				
Coils	RF			
	IF			
Controls	Vol.			
	Tone			
	Band			
Switches	Misc.			
Speaker	Cone			
	Field			
	Head			
	Motor			
Phono.	Changer			
Alignment	IF			
	RF Bands			
Other Work Done				

Pick Up and Delivery — Estimate
(Minimum Labor Charge) — Hrs. Labor @ ($.....)
Total Charge
Final Inspection ..... This is your invoice—Please Pay Serviceman
Customer's Signature ..... Serviceman's Signature .....

Air Conditioning & REFRIGERATION NEWS

Trade Mark registered U. S. Patent Office;
Established 1926 and registered as
Electric Refrigeration News

F. M. COCKRELL, *Founder*

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MARCH 30, 1942

Refrigeration Will Help
Win the War

Tire Shortage & the Industry

SO many shortages, restrictions, prohibitions, and curtailments have hit the refrigeration industry in the last few months that not much attention has been paid to the effects of tire rationing on the industry. These are apt to be profound—and possibly not altogether to the disadvantage of the industry.

First up is the drive to obtain retreads for refrigerator service men. Some local rationing boards allow it; some don't. The NEWS has printed several news stories telling about the situation with regard to tires for service men in different localities. We are also publishing letters from indignant subscribers who, unable to get action from local tire rationing boards, want some sort of a national ruling.

TIRES FOR SERVICE CARS ARE AN ESSENTIAL ITEM

We think they're right; and furthermore, we think that there's a fair chance that they'll get their ruling. If ice delivery trucks can get tires, it's obvious that service men for mechanical refrigerators should have them, too. Big difficulty is the fact that most service men go to their jobs in passenger cars. It will be necessary to demonstrate that these passenger cars are actually performing truck duties.

If and when refrigeration service men are granted replacement tires, it will help the refrigeration industry as a whole nail down the inevitable fact that *refrigeration is essential,* that without it, people in this country aren't going to eat regularly.

A second result of the tire rationing program is the probable decline of the super market, and the return to favor of the neighborhood store. People no longer will be able to drive to the big penny-saver markets, or out to country roadside stands. They will walk for their purchases.

Because of sharp declines in its volume during the last several years, the neighborhood store won't be in shape to handle all the new business it's going to get. In particular, the neighborhood store will need new, adequate commercial refrigeration equipment.

NEIGHBORHOOD RESTAURANT WILL COME INTO ITS OWN

The same thing applies to the neighborhood restaurant and the neighborhood bar. Those fancy places on the outskirts of town will be all washed up in another year. Even the big spots downtown may suffer. Their hard luck will be the neighborhood restaurateur's gain. He, too, will need more refrigeration equipment.

All of this adds up to a lot of business for commercial refrigeration dealers. So, you see, the tire shortage is an ill wind which may "blow good" for some of our friends in this industry.

Incidentally, for refrigerator and appliance dealers who have good locations and are wondering what to do with them, we suggest that they look into the possibilities of starting:

(1) Restaurants

(2) Bars

(3) Beer gardens

(4) Neighborhood locker storage plants

(5) Grocery stores and meat markets.

All require refrigeration; all seem to be due for booms; all deal in non-priority stocks. Maybe here's a real opportunity in many localities for the aggressive business man who no longer can look to appliances for his livelihood.

LETTERS

WHY TIRES ARE NECESSARY FOR SERVICE AUTOS AND TRUCKS

Krich-Radisco, Inc.
422-432 Elizabeth Ave.
Newark, N. J.

Editor:

Our company, as you know, has been in the major appliance business for many years and is considered one of the largest in the country. In conjunction with the sale of radios and major appliances we maintain a large service department which is responsible for the servicing of all refrigerators, Bendix, Ironrite, sewing machines, and other appliances which we distribute.

This letter is primarily being written on behalf of our refrigeration service men. We are anticipating that ultimately these men will wear out the tires on their cars and put them in a position of not being able to go out and do the necessary servicing job. At present, of course, the tire rationing board have not seen fit to include refrigeration service men in the catagory of "essential production."

It is difficult to understand the attitude of the officials in Washington that has been taken in reference to refrigeration service men. **The writer hesitates to think what would occur to one of the officials if his refrigerator sprung a leak in July or August and it was impossible for a service man to quickly get to him because he had no use of a car.** Cannot you visualize the telephoning and the expressions from this official to his dealer as to when that service man would get there, as the "box" was loaded with food and no service has been rendered for days. Why the cost of the food spoilage alone was terrific.

Can't you just visualize something like the above? Of course you can, and so can all the other officials, and how about the defense worker who is so important in the overall picture. He uses electric refrigeration and it is necessary for him to preserve his food properly so that he and his kind can go to that plant and factory with food in his system that was properly preserved by refrigeration.

This is all elementary. However, it is apparent that the rationing board in Washington do not understand the real importance of the refrigeration service man in the overall picture for victory.

We think it is time that the industry combines and as a unit goes to Washington with the express purpose of having refrigeration service men considered a very essential part of our National Defense Program.

DAVE WAGMAN, Manager
Commercial Sales, Appliance Parts & Service Dept.

SERVICE MAN ARGUES CASE FOR NEW TIRES FOR CARS

H. G. Bogart Co.
Toledo, Ohio

Editor:

I am enclosing a clipping which I took out of the "Chicago Tribune" one day last week and I think it outlines, in rather concise form, a serious problem we are beginning to face in this industry.

We all know that the maintenance of household equipment will fall on the shoulders of thousands of service men, many of whom are not equipped to carry on for an indefinite period unless they get some recognition on the part of the government.

With people spread out as they are today, it is physically impossible for a service man to discharge his duties efficiently and capably without the use of an automobile. Also, many of these service men do not have a truck with which to operate and rely on their own personal passenger car or a car which is in that classification for doing their service work, carrying parts, etc.

I think Mr. Metzger who wrote to the "Tribune" gave a very clear picture of the entire situation and also some sound logic along with it. I would like to see you speak out editorially, both for Mr. Metzger and the group which he represents, and thus bring the whole situation to the attention of those people in Washington who decide matters of this kind.

While the situation, at the moment, is probably not acute, it is bound to become so later on and we ought to have some such recognition for service men long before the real crisis is here.

H. G. BOGART,
President

* * *

From the "Chicago Tribune:"

CHICAGO, March 5—I am a refrigerating machine service man. I service packing houses, grocery stores, meat markets, restaurants, institutions, etc. I am so badly in need of tires that unless I can get some I shall have to quit work. Yet I am informed that definitely I cannot get tires.

I purchased two used tires at $16 apiece and a used tube at $3.50. I drove one mile and the one blew out—I got about 40 miles on the other before it went. The man who sold them to me is considered reliable, but there can be nothing done. I am just out the cost of the two tires.

It seems to me, considering all that is said and written about economy, public health, etc., that some steps should be taken to keep these ice machines in repair. We cannot get to them to service them without a car. Should a whole cooler of meat spoil just for lack of tires?

The ration board tells me that if we get trucks we can have tires. Where am I and the 400 men like me in Chicago going to buy trucks? A truck requires a heavier tire. Wouldn't it be better to give us the lighter one since the idea is to conserve rubber, not the number of tires?

G. E. METZGER

They'll Do It Every Time . . . . . By Jimmy Hatlo

FIRST BULLETIN ISSUE GETS NEWS THERE FASTER

Specialties Distributing Co.
525 E. Jefferson Ave.
Detroit, Mich.

Editor:

A good football coach is always willing to sacrifice bulk for speed—you know the tactics.

I have just finished reading the first issue of the "Bulletin" and like it very much.

I got through the vital news in a hurry and also noticed that you gave excellent effect to the copy of your loyal and consistent advertisers.

You are to be thanked by everyone in the refrigeration industry for this speeding up of the "latest news."

LEONARD F. TURNBULL

A POETIC CONTRIBUTION

3917 Terrace St.
Kansas City, Mo.

Editor:

I am a great admirer of your brilliant writings and in appreciation of your fine work and generous help extended the refrigeration industry I wonder if you will accept my poem enclosed herewith.

You may either publish it or throw it in the basket with so many other nutty ideas you, no doubt, receive in the day's work.

CHARLES F. HAUNZ, E.E., Ch. E.

* * *

To: AIR CONDITIONING & REFRIGERATION NEWS:
Dedicated by a grateful friend—

THE RUSSIAN INVENTOR
or
Men or Microbes?

When my device has killed a million
I'll go and say "Give me a billion."
Then I can join the potentates
Fling mud and lies on other states
No noise, no cost, no energy,
No breakdown of machinery.
It must be large and plentiful
And must provide a steady pull
O—I am drifting from my plan
A million dead or on the run—
I feel I get an inspiration
By golly yes—it's REFRIGERATION.

NEWS OF 'CONTINUAL VALUE'

The Canton Hardware Co.
1221-1227 Third St., N.E.
Canton, Ohio

Editor:

Let me say that we have found for many years that the information and services furnished by your excellent publication are of continual value to anyone in the refrigeration or air conditioning field.

J. W. BROTHERS,
Executive Officer

MARCH 16 ISSUE MAKES A HIT

Refrigeration & Industrial Supply Co.
422 South Seventh St.
Minneapolis, Minn.

Sirs:

We were particularly pleased with your issue dated March 16 to the extent that we would very much appreciate your sending us an additional copy.

N. L. SULENES

'KEEP 'EM INFORMED'

1829 Madison St.
La Crosse, Wis.

Sirs:

OK boys, let's keep up the good work and 'Keep 'em informed.' We will all need it and you can give it to us.

GEO. B. BRACKEN

Rebuilding Operations

Overhaul and Reconditioning of the Frigidaire 'Meter Miser' Unit

By R. L. Walsh, Westchester Dealers Refrigerator Rebuilding Service, New Rochelle, N. Y.

Editor's Note: The following article on the fundamental procedure in overhauling the Frigidaire 'meter miser' unit was prepared by Roland L. Walsh, of the Super Refrigeration Sales & Service in New Rochelle, N. Y., which firm acts as the exclusive rebuilder of electric refrigerators in Westchester county. Articles on other types of units will probably follow.

The Frigidaire "meter miser" compressor does not offer many more problems to the repair and rebuilding shop than any other type of sealed unit. There are a few tricks that can be applied in handling this unit, which will be explained in this article.

Most common service complaints about the "meter miser" unit are those of "don't freeze," "don't run," or "run continuous." Therefore, the first thing for the shop man to do when he gets one is to plug the unit in while it is still in the cabinet, and find out what the unit does or doesn't do, before taking it down.

First move is to put a gauge on the low side, using the "CY" or similar set, and take a low side reading. If you should get a reading of 20 inches of vacuum, don't become alarmed as some "meter misers" pull a low vacuum.

CHECKING THE RESTRICTOR

If the gauge reading should be lower than that, apply heat to the restrictor on the back inside of the evaporator. If it makes a gurgling sound, the restrictor must be replaced, but if it doesn't, the trouble is not in the restrictor.

Plug the a.c. line into a wall socket and if the motor does not operate, check the relay under the cabinet on the left hand side of the "meter miser." Check the overload coil and if it is not broken, note if it becomes red hot when the unit is plugged in but the motor doesn't operate. If it is hot it means that the motor is stuck or overloaded, and that the unit must be dismantled.

To remove the complete system, start by taking off the control. Next step is to unbolt the evaporator, remove the screws holding the long black condenser at the rear of the cabinet, and then loosen the compressor bolts. The evaporator can then be lifted out of the cabinet by pulling the rear of it down then up and over, and at the same time the compressor may be taken out.

The three wires on the underside of the motor should be disconnected, and the color scheme of the wiring marked down so that the correct hookup will be made later.

Liquid and suction lines should be cut as close as possible to the parts with which they connect so that they may be swedged later.

The motor and compressor should be removed, and the springs and the small composition noise eliminators checked. The compressor should then be opened, preferably by a welding shop with the proper tools.

The stator should be moved by hand to determine if it moves freely. Winding should be tested with a test lamp, and if they are not okay, they will have to be rewound.

It is a good idea to insert a new discharge valve. Then wash out the unit. When all parts are thus checked in the manner described, have the top welded back on the unit, and then put in the right amount of fresh oil (very light) in through the plug on the bottom.

Cut out the restrictor, leaving as much tube on both ends as is possible. If you have another restrictor, put it in place. If you can't get one, use a piece of capillary tubing 2 feet long. Coil it on a screw driver handle, leaving 4 inches of tubing on each end.

Clean thorough the ¼-inch tubing that receives both ends of the restrictor or capillary tubing. Insert one end of the capillary tubing about 2 or 3 inches inside the ¼-inch tubing, then take a flaring block and squeeze the ¼-inch tubing tight to the capillary. Do the same on the other end and then solder both sides.

Renew the dehydrator and then swedge the liquid and suction lines of the compressor to their respective lines. Make sure the evaporator is level when you put it back into position.

CHARGE MUST BE EXACT

Hook up the three lines to the motor, open the liquid valve, and plug in the unit and start it, to purge out any air in the system. Then charge the system with "F-114" refrigerant. The average "meter miser" takes 15 ounces of "F-114," and it is important not to overcharge or undercharge. If the machine stalls due to an overcharge, purge the "F-114" back into the drum and charge again at a slower rate.

After the system has been charged let it cycle two or three times and then place the unit in the cabinet. Check the cycling of the unit, and if it is necessary to adjust the control, there is an outside adjustment means.

For a final check as to whether the system is functioning properly, do the following:

After the machine has cycled three or four times, take a look at the evaporator as soon as the machine cuts in, to see if the evaporator is still frosted all the way up to the top. If it is defrosted, set the control higher, but before doing this listen to the evaporator and make sure it is gurgling. If it isn't, apply heat to the condenser, making certain it is warm, but not red hot.

Then watch the cycle again and determine if the gas is coming into the refrigerator in good style. If it is, and the machine still defrosts before kicking on, stop the machine and purge air from the system. Repeat the purging until you are certain all air is out of the system.

Cabinet Polish Now Is More Important Than Ever In Service

WICHITA FALLS, Tex.—Deft application of a bit of polish plus the use of some "elbow grease" to eliminate the usual unsightly grease left on a household refrigerator following a repair job make a hit with housewives who link that added touch with satisfactory repair service, Coyl Francis, head of the Household Appliance Co. here, has discovered through his own experience.

This added service on the part of the service man inspires the customer's confidence, paving the way to "suggestion" selling for the repair man. Mr. Francis cites a recent sale of $25 worth of items as the result of such selling methods.

"In our department we find that 'suggestion' selling is practical in our business," Mr. Francis said. "Repair men, after doing repair service, show the customer items they have to sell, making suggestions for their use."

Proud of their gleaming white refrigerators, housewives are somewhat resentful when service men leave their greasy symbols over the boxes' white surfaces. Users of commercial refrigeration feel the same, Mr. Francis stated.

Consequently, his service men now finish off their repair jobs by polishing the refrigerators with Kelvinator polish. This extra bit of "polish" to the repair job is resulting in a large sale of cans of polish, Mr. Francis reports. Frequently just seeing the results of the polish is sufficient sales talk for the customer to purchase some.

The Household Appliance Co. also boosts its service department by sending letters to owners of both commercial and domestic refrigeration equipment, emphasizing the probable future difficulty of obtaining repair parts and suggesting its inspection service at a nominal cost.

Suggestions Outlined For Proper Care of Rubber Belt Drives

AKRON, Ohio — Suggestions on "How To Get the Most Service Out of V-Belt Drives" is one of a series of pamphlets designed to aid rubber conservation put out by the B. F. Goodrich Co.

When applying belts the following precautions are important, the pamphlet states:

1. See that sheaves are lined up.
2. See that sheave grooves are clean, free from harmful burrs and not unduly worn down.
3. Keep reasonable tension on belts —adjusting several times soon after being put into operation if necessary.
4. Do not force the belt into the grooves—run take-up back to supply the necessary slack.

When belts are in operation the following precautions should be observed, the pamphlet declares:

1. Check alignment periodically.
2. Keep sheaves aand belt clean—especially free from oil and grease.
3. Keep take-up adjusted to reasonable tensions.
4. Don't leave tools, bars, or other material where they might fall into the drive and break the belt as the material passes between the belt and the sheave groove.
5. Don't expect the drive to pull heavy overloads (above designed rating) for long periods of time.
6. If possible, protect the belt from the direct light of the sun while the drive is in operation.

Restrictions Are Placed on Parts Made From Reclaimed Rubber

WASHINGTON, D. C.—Manufacturers of rubber parts for refrigerators, washing machines, and motor-driven electrical appliances are in "class 3" for supplies of reclaimed rubber, under a new series of controls on this material put into effect March 21 by WPB.

The restrictions on scrap or reclaimed rubber, which permit consumption for designated products only, are contained in Amendment 6 to Supplementary Order M-15-b. A serious shortage of scrap rubber was given as the reason for this.

After March 31, the use of reclaimed rubber is banned except for the following purposes:

1. To manufacture any of the products for which crude rubber or latex is permitted, provided that reclaimed rubber may not be used to fill war orders until a report has been forwarded to the WPB rubber branch.
2. To manufacture a specific list of products, known as list "E," the amounts so used to be determined by a specific formula.
3. For the month of April only, to manufacture another specific list of products, known as list "F." After April 30, specific allotments of reclaimed rubber will be made from time to time to manufacturers on this list. (Refrigerator and appliance parts are on "F" list.)

The order also contains a general ban on the destruction of certain rubber products except where essential to manufacturing or reclaiming operations.

Navy Yard Installation Finished, Philadelphia Service Problem Eased

PHILADELPHIA — Completion of refrigeration installations at the Philadelphia Navy Yard and Army Supply Depot here is said to have helped appliance dealers and service men to reopen refrigeration service shops closed down temporarily for lack of experienced mechanics. Approximately 85 refrigeration mechanics had been employed by the government in construction of coolers, installing air conditioning, etc.

Former Auto Dealer To Offer Repaint Facilities

LINCOLN, Neb. — Repainting household refrigerators to match the kitchens' color schemes is the focal point around which the DuTeau Chevrolet Co.'s campaign to secure home refrigeration service work is being built.

Recently taking on a home freezer and electrical appliance line, the former automobile salesroom has turned over its new car sales floor to display of these items.

Electrical Products of Baltimore Expands

BALTIMORE—Larger space and showroom accommodations were achieved by Electrical Products, Inc. in moving to 22 Howard St. from 15 S. Howard St. last month.

What's New

Descriptions of some of the brand new items for the refrigeration and air conditioning, and major appliance fields.

Plastic Covering To Stop Pipe Sweating Is Placed on Market

KANKAKEE, Ill.—The introduction of NoDrip, an improved plastic cork coating that stops dripping from condensation or sweating pipes, tanks, ceilings, walls, and air ducts, has been announced by the J. W. Mortell Co. here after three years of research and tests under all conditions at Purdue university and in many industries.

NoDrip can be spread ¼-inch thick over any metal, concrete, brick, plaster, tile, wood, composition, galvanized, or painted surfaces, corners, angles, or corrugated ceilings with an ordinary paint brush for pipes and small areas, a whisk broom on corrugated ceilings and large areas, and an air spray for large surfaces.

The first product of this kind introduced by the J. W. Mortell Co. for the same purpose was more limited in its use in large areas because it had to be applied by power spray equipment. However, NoDrip has a greatly enlarged field, not only in industry but in homes and on farms, due to its easier and quicker method of application by using an ordinary paint brush, the company states.

NoDrip has been perfected to act as a protective coating, preventing rust and adding life to metal surfaces. Its use is recommended by its manufacturer for stockrooms, warehouses, factories, shipping and receiving rooms, freight cars, trucks, and cargo ships in order to prevent damage to merchandise by condensation drip.

Trane Makes Three Ventilators for Blackout Use

LA CROSSE, Wis.—To provide ventilation for blackout plants and buildings in which work must be carried on despite the possibility of air raids, the Trane Co. has designed three "blackout ventilators."

The ventilators were built to meet a need created by the current program for industrial building expansion, the company says. Trane Co. pointed out that changes in the conventional practice of ventilation were required as immense structures of great floor areas running into acres demand positive ventilation, because the normal infiltration of outside air from windows, doors, and outside walls is lacking, while the roof areas provide a solar heat load which maintains the temperature of the occupied space far above the outside temperature.

In addition, the very nature of modern warfare has demanded that ventilators be designed to meet conditions imposed by a "blackout," which means that ventilators must be lightproof as well as weather-proof.

The three basic models of the blackout ventilators are the summer supply unit, which is designed to provide large volumes of outside air with perceptible air motion at all times; the exhaust unit, which is merely an exhaust fan arrangement whereby the air in occupied areas is exhausted from the building; and the winter supply unit, which is designed for application in conjunction with the existing heating system and contains heating coils, face and bypass dampers, and a propeller fan.

Plastic Caps Developed For Sealing Tubing

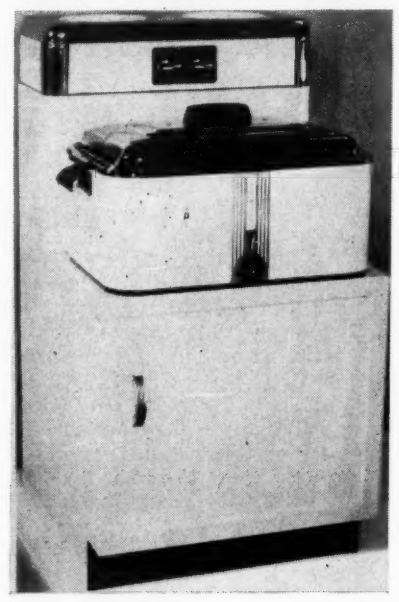
LOS ANGELES—Designed to protect plain end and beaded tubing from handling knocks and shocks and to seal out dirt, dust, and moisture, a new line of flexible metal caps has been announced by Tubing Seal-Cap, Inc. here.

A unique steel spring of hourglass design is incorporated in these new caps which are sold under the trade name "Flex-Caps."

When turned in a counter-clockwise direction, the spring expands to accommodate the tubing which it seizes firmly when released. It is said that flex-caps cannot be knocked off and won't pull off until turned off when removal is necessary.

There is no danger of particles chipping off and entering the tubing, nor of tubing becoming damaged when dropped or struck, it is said. Flex-caps are available to fit all standard tubing from 3/16 inch to 2 inches.

New G-E Package



General Electric is marketing this roaster-hotplate-cabinet package for low-income homes.

* * *

Roaster - Hotplate Group Marketed by G-E for Low-Cost Homes

BRIDGEPORT, Conn. — Designed and available only for low-cost housing projects where limited space, moderate price, and portability are considerations is a new electric roaster-hotplate-cabinet combination developed by the appliance and merchandise department of the General Electric Co.

This "package," which will do the basic cooking job for a small family electrically and economically, is not available to individual customers as a unit through regular channels of distribution, but may be obtained in quantity orders through G-E distributors at a special price of approximately $35 per unit, depending on exact specifications, etc.

Several hundred of the combination units have been sold so far to a housing development of the Glenn L. Martin Co., at Middle River, Md. It is thought that it may be possible on future orders to make availablle also a 15-gallon electric water heater as part of the combination, since material priority rulings may be obtained for this type of order where housing needs are being filled as part of the defense program.

Advantages claimed for the combination are a saving in initial cost over more elaborate equipment; a saving in space, since the unit occupies less than 4 sq. ft.; economical installation cost—the unit just needs to be plugged into the household circuit and requires no special wiring, except for the water heater; flexibility in kitchen layout; and a permanent portability which makes the combination easy to move.

All types of meals may be prepared with the two cooking appliances. The standard G-E roaster has a capacity of 18 quarts, a 1,320-watt heating element, and is thermostatically controlled.

The hotplate has two open-coil surface units and a total rated capacity of 1,650 watts. One 1,000-watt unit is controlled by a three-heat rotary reversible switch, and one 650-watt unit is controlled by an on-and-off rotary reversible switch.

The all-welded heavy-gauge steel cabinet, finished in white baked enamel, is especially made for the combination.

Farnsworth Is Awared Advertising Medal

FORT WAYNE, Ind.—The 1941 advertising campaign of the Capehart division of Farnsworth Television & Radio Corp. has received the medal award for technical excellence of layout, art, and typography in the annual advertising awards conducted by "Advertising & Selling" magazine.

Presentation of the award was made to I. C. Hunter, Capehart sales manager, and S. E. Peacock, vice president of N. W. Ayer & Son, Inc., the company's advertising agency. Manager of advertising and sales promotion for Capehart is John S. Garceau, who is well known in the appliance field through his former association with Kelvinator, Philco, and Crosley in promotion and advertising work.

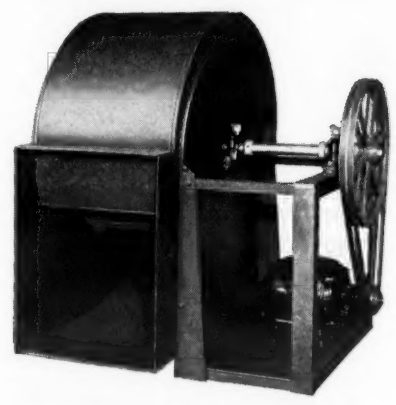
Electric Eye Used To Blackout Sign

BINGHAMTON, N. Y.—When the street lights went out in a recent trial blackout here, General Electric's newly designed photoelectric blackout sentinel, which had been installed in a second-floor window of a Binghamton bank, automatically extinguished a large neon advertising sign on the roof of the bank in its first practical demonstration.

The equipment, directed on a street light outside the building, consisted of a small box containing a phototube, or electric eye, and relays. When the street lights came on again, the sign was automatically relighted.

This electric-eye sentinel was developed especially for extinguishing unattended lights during air raid blackouts, Allen E. Bailey, G-E engineer, said. The equipment is economical, easy to install, and once in place requires no attention, operating at all times in conjunction with the street lights, he explained.

38 Blowers Are Included In New Peerless Line



WARREN, Ohio—a new line of blowers for ventilating, heating, and air conditioning has recently been introduced by Peerless Electric Co.

There are 26 sizes in the belt driven type and 12 in the direct connected type. Specifications and price information on the blowers are included in the Peerless Electric Co. folders SDA91 and SDA92.

Metal Alloy Is Used to Solder Aluminum

LOS ANGELES—A new metal alloy, Galvalloy, recently introduced by Metalloy Co. here, is claimed to obtain a perfect soldering bond with aluminum or aluminum alloys without use of flux of any sort. It also is said to bond practically all types of metals, allowing the bonding of aluminum or aluminum alloys to these metals.

In using the material, the surface to be coated or soldered is heated with a welding torch to about 600° F., then a stick of alloy is applied directly to the heated surface. Next a stiff wire brush is used until a bright finish is secured. If a heavy deposit is desired, after the initial bond, more material is applied and agitated with a paddle or wire brush until the required thickness is obtained.

The alloy can be used in foundries where aluminum castings are made for filling blow holes or defects, and as a protective coating on welded seams or other areas where a non-corrosive coating is needed, it is claimed.

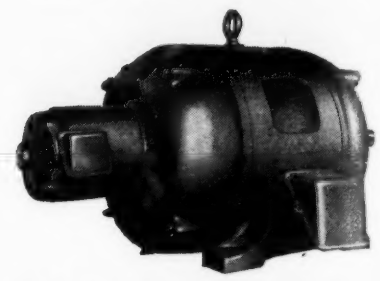
Solder for Special Metals Introduced by Johnson

CHICAGO—A special solder developed for the soldering of all hard-to-solder metals such as aluminum, aluminum alloys, die cast, Dowmetal, Almico, etc., has been introduced by the Lloyd S. Johnson Co., 2241 Indiana Ave., here.

The material is free-flowing and is said to provide unusual tensile strength in sheet metals and extruded aluminum. It retains color of aluminum and Dowmetal, and is corrosion resistant.

Solder comes conveniently rolled ⅛ inch square and runs approximately 270 inches to the pound. Price is $2.50 per pound or 10 pounds for $18.70.

Century Generator



This is one of the new generators built by Century Electric Co.

* * *

New Generator Line Covers Wide Field

ST. LOUIS—A new line of compact, revolving field, alternating current generators, available in sizes from 7½ to 75 KVA—4, 6, or 8 pole, 1,800, 1,200, or 900 r.p.m., 60 cycle (with corresponding speeds for other frequencies)—for belt or coupling drive or flange mounting, has been announced by Century Electric Co.

The new generators are offered for continuous duty in isolated plants, or to supplement other available power supply. Built to meet AIEE and Nema voltage regulation standards, they are wound for the various standard voltages—single phase 2 and 3 wire, three phase 3 and 4 wire, or two phase 4 wire. The neutral may be brought out for three phase 4 wire systems for light and power.

Automatic voltage regulator is generally used for best lighting service where the load fluctuates through a wide range. Units can be designed for any desired value of power factor, but the regulation will be governed by the power factor.

Dorex 'Kno-Draft' Line Of Diffusers Ready

NEW YORK CITY—Adjustability is claimed as a leading feature of the "Kno-Draft" ceiling diffuser being marketed by the Dorex division of W. B. Connor Engineering Corp. here. Entire inner cone assembly may be raised or lowered to vary air direction from vertical to horizontal.

In cooling systems the inner cone is lowered to obtain a horizontal airflow, since cool air has a tendency to drop of its own accord. In heating systems it is raised for a vertical airflow, forcing downward the warm air that normally tends to stratify at the ceiling.

Formerly fabricated of spun aluminum, the diffusers are now made of steel, and are available in a unit combining diffused supply air and return or exhaust in one terminal, as well as with built-in direct or indirect lighting.

General Controls Issues Catalog on Equipment

GLENDALE, Calif. — A new 48-page catalog of General. Controls' complete line of regulators, control systems, and solenoid valves has just been issued.

Several new products are introduced for the first time, including small commercial size motor operated valves, new three-way magnetic lever valves, sensitive d.c. relays, and the new type PV series electric magnetic valves.

'Trading of Customers' Seen as Likely Course For Servicemen By Toronto Meeting Speakers

TORONTO, Ont., Canada — Increased demands upon the time of the individual service company and individual refrigeration serviceman will inevitably lead to more cooperation among firms in this field, and to better management methods in the service business, it was acknowledged at the annual Canadian refrigeration conference here March 15 and 16 sponsored by the Toronto Maple Leaf Chapter of the R.S.E.S.

(A previous report on the conference explaining the priorities matters discussed at the meeting was published in the March 23 bulletin issue of the NEWS.)

It is not unlikely, said E. B. Wilkins of Frigidaire Corp., that servicemen will soon be "trading" customers—where one serviceman gets a call from a section of the locality that he is serving that could be handled much faster and easier by another serviceman who was closer to the person entering the call.

"There will be several reasons for this," said Mr. Wilkins, "the gasoline and tire rationing will force it if nothing else will.

"However, just as good a reason will be that under conditions which will include more calls per day and a shortage of manpower, the serviceman just won't be able to spend too much time going to and from calls. Another factor is that he is going to have to spend more time on each call, doing a complete repair job in practically all instances, and not just a 'patch' affair.

(As reported in the March 23 issue G. E. Graff of Ranco, Inc. told the Toronto conference of an instance in which servicemen were giving trial to a "taxicab booking" plan whereby a central phone office handles calls sent to any serviceman's phone number in the city, and these calls are apportioned on the basis of who is available.)

Proper routing, the Frigidaire man declared, is now a No. 1 consideration for the serviceman and he must take time to do it. Failure to route his calls properly will not only cause a loss of customers to servicemen, but will leave him without transportation facilities near the end of the rationing periods, it was pointed out.

"And make certain that you have all the necessary and available tools and supplies when you start on the job," said Mr. Wilkins. "This is no time to fall heir to the gag about the plumber and his forgetfulness on tools."

Training and education of servicemen is bound to take on an added importance, said Mr. Wilkins, and the real emphasis will now have to be placed on a thoroughness of training so that each man can handle any type of job on his own.

H. T. McDermott, international secretary of the R.S.E.S., brought out the following points in his address to the conference:

The attention of the government as well as the industry is focused on maintenance and repair. In the U. S. the government expects everything to be kept in operation—without replacement.

One demonstration of this is that practically none of the limitation orders curtailing production of consumer goods affect the production of repair parts in any way, shape, or form.

It is more than likely that there will be a licensing of refrigeration service companies in the U. S. by some agency of the government.

The servicing of refrigeration equipment installed in Army camps and other direct government projects is definitely opening up a large new market for service and maintenance work. Present tendency in U. S. Army cantonments is to give the maintenance of all camp facilities to some civilian "utilities" man, who in turn will probably sub-contract the refrigeration maintenance work.

Other speakers at the conference a report of whose talks appeared in the March 23 issue included J. W. Krall, Detroit Lubricator Co.; George Allen, Mueller Brass Co.; G. E. Graff, Ranco, Inc.; K. M. Newcum, Superior Valve & Fittings Co.; R. H. Israel, Virginia Smelting Co. A discussion of "Re-operation of Condensing Units" by William Marshall of Leaside, Ontario, will be reported on in a later issue.

Two industrial films were shown at the conference, "Copper Goes to War," through the courtesy of Anaconda Copper Co.; and "Refrigerants" by courtesy of Virginia Smelting Co. H. S. Paris, chairman of the education committee of the Maple Leaf Chapter, lead an "Information Please" session at the close of the conference.

Refrigeration Engineering, Inc. Wins Injunction Against Infringement of Water Defrost Patent

LOS ANGELES — A judgment enjoining the Acme Scale & Fixture Co., a commercial refrigeration dealer, from selling a water defrost device for refrigerating coils, has been obtained by Refrigeration Engineering, Inc., manufacturer of water-defrost coils, in the United States District Court, Southern District of California, central division.

Refrigeration Engineering, Inc. had contended that Acme Scale & Fixture Co. had purchased a refrigeration coil embodying water defrost from Peerless of America, Inc., and that this coil, later leased to a food market, was in violation of Refrigeration Engineering's patent No. 2,219,393 covering water defrost coils.

The court made the following points in rendering its judgment:

1. That Patent No. 2,219,393 granted to Refrigeration Engineering, Inc. is good and valid.

2. That the case comes under the Patent Statutes of the U. S.

3. That the defendants had infringed the patent by selling and using refrigerating devices embodying water defrost.

4. That the defendants be perpetually enjoined by a writ of injunction from making, using, or selling, water defrost devices for refrigerating coils.

Kathabar System Will Be Installed To Supply Dry Blast To New Steel Mill Furnace

TOLEDO — Surface Combustion, division of General Properties Co., Inc., has been awarded a contract to supply a Kathabar moisture control system for furnishing dry blast to the new blast furnace of the Republic Steel Corp., Alabama City, Ala.

The Kathabar System is to treat 90,000 c.f.m. of air and is to operate at one, two or three grains of air moisture, depending upon seasons. Such flexibility of operation provides for constant uniformity of product throughout the year.

The Kathabar System will require one 50-hp. motor for power. Officials have estimated that 10% increase in furnace capacity, due to the application of Kathabar dry blast, would supply the necessary materials for the equipment in one day's time.

Although this installation represents the first for blast furnace application, Kathabar installations for cupola dry blast have been in operation since 1938. To date, there is a total of five cupola installations and two more will be installed within the next few weeks.

New Williams, Ariz. Store

WILLIAMS, Ariz.—A new furniture and appliance store has been opened by R. E. Mott at Third and Railroad Aves. in this city.

Steel Shipments Going 70% on A-3 Ratings

NEW YORK CITY — Steel shipments this month are rapidly reaching the point where almost 70% involves material carrying ratings of A-3 or better, the "New York Times" reports.

"This condition," said the 'Times,' "substantiates the opinion of some observers that concentration in the upper brackets was increasing to an extent which would make it difficult, if not impossible, to obtain shipments of material carrying ratings such as A-4, A-5, and lower."

It is believed that the volume of rated steel tonnage produced this month or early next month will approximate 95% of total steel shipped. Practically all the unrated tonnage being shipped today involves by-products of balancing out schedules or represent rejected material which, although not acceptable on rated business, will often be taken by consumers, the article stated.

"The change over from nonrated to rated steel business on a large scale has been exceptionally rapid in the last few months," the "Times" says. "Nevertheless the WPB is exercising close check on volume of shipments of steel by each company in order to determine to what extent nonrated deliveries are being made."

Instructions sent out last week by the WPB iron and steel branch that steel companies must adhere to the priorities system by "going back to the ingot" and filling orders in the proper sequence, regardless of the type of steel product, coincided with the general practice in the industry.

Nothing To Prevent Installation of Air Conditioning Systems - - But Have All Materials on Hand

WASHINGTON, D. C.—Installers of commercial refrigeration and air conditioning systems will find it smart to have "everything on hand" in the way of materials needed before starting to install any system on which priorities have not been obtained, according to advice from War Production Board officials.

Contrary to some opinion in the field, it is pointed out, there is nothing prohibited by the Priority Regulations—no violation of any order whatever—in the installation of an air conditioning or commercial refrigeration system, if the installing firm has the equipment and wishes to sell it without a priority.

Difficulties often ensue, however, when an installer starts out on a job either reasonably certain that he has all his needed material, or figuring to get it "somehow" later, and then right in the middle of the installation the discovery is made that some parts or pieces are missing which are most difficult to obtain without a priority.

Should an installation be complete up to the point where "Freon" was needed to complete the installation, the application should be made on Form PD-160 to get the refrigerant. Whether the installer would get it or not would depend upon whether there was enough available during that month to allow for an allocation to the Class 4 group of applicants.

WPB Wants Data on Sheet Metal Shops

NEW YORK CITY—Sheet metal shops are urged by the Contract Distribution Branch of WPB to register their facilities with the WPB office.

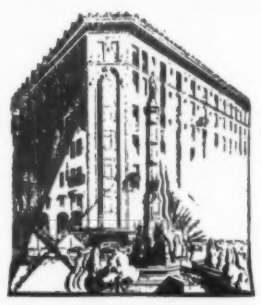
In a speech before the Roofing & Sheet Metal Crafts Institute, Inc., Frank Knight of the New York office discussed the need for sheet metal work in the defense effort explaining that, "A great number of metal working establishments which formerly fabricated auto accessories, refrigerators, etc. are now without work."

Many contracts and subcontracts are available for work on equipment for the Navy, airplane factories, and defense housing. This type of work, Mr. Knight suggested, will help to protect the small shops and to keep labor from drifting to other more profitable lines of work.

Veteran Newark Dealer Enlarges, Adds Lines

NEWARK, N. J.—In the face of shrinking supplies of refrigerators and other major appliances, Wallraff Appliance & Sales Co. last month moved into new and larger location at 1224 Springfield Ave. here, just a few doors away from the store's former location, 1244 Springfield, where Owner Louis Wallraff went into the business 25 years ago.

The building, a two-story structure twice the size of the former location, has separate showrooms for each of the Kelvinator, Bendix, and Philco products handled by the company. As supplementary products, the store had added electric sewing machines, commercial refrigeration, a phonograph record department, wood kitchen cabinets, and other lines less likely to be affected by war material requirements.



What to Check When Electric Motor Does Not Start

Motor Troubles & Their Correction

Editor's Note: Following is part of a section on servicing motors, in a series of articles on motor construction and operation.

By R. A. Fuller,
Industrial Engineering Dept.,
General Electric Co.

Complaint - -

B. Motor Does Not Start

10. Short Circuit in Motor Winding (Cont.)

The construction of a growler is fairly simple as shown in Fig. 65. The core is made of strips of soft iron about 1/32 inch thick such as used for the cores of transformers. Possibly the simplest way to obtain this is at a junk yard from an old transformer. If not otherwise obtainable get sheet iron of this thickness, or less, and cut it into strips of the proper width. Lamination iron will have an insulating coating on its surface.

If a substitute has to be used coat the surface of each strip with insulating varnish, or shellac, or put a piece of paper between each metal strip and the next one when stacking them.

The base part of the core is made of rectangular strips stacked as shown in Fig. 66. When the stacking is complete grip it with two "C" clamps at the points marked "A." Then wind it very tightly with two or three layers of friction tape, removing the clamps to complete the job, out just to the bottom of the slots at each end.

Number 16 enameled double cotton covered wire, or wire with some other equivalent insulation, is used for the winding. A different size of wire can be used and the correct number of turns determined by experiment.

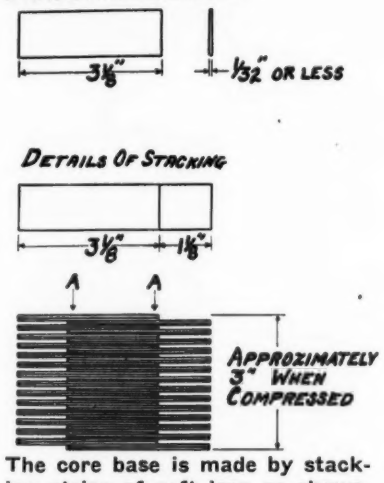
Starting at one end, with about a foot of wire left loose as indicated by the "short end" in Fig. 67, wind one layer of wire with each turn touching the previous turn to get a smooth job and to get the most turns per layer. Always wind in the same direction as indicated by the arrow.

When the first layer has been completed wrap it with one layer of friction tape over the entire length. Then commence winding the second layer, over the first one, progressing gradually back so that when the second layer is completed the long end and the short end of wire are at the same end of the coil. Wrap again with one layer of friction tape and put on the next layer. Continue winding until approximately 500 turns of wire have been wound, and two or three layers of tape put over the whole coil. Then bring the long and short ends of wire up onto the outside surface.

Wind tape over the whole coil to hold these two leads in place as shown in Fig. 65. Throughout the coil the purpose of the tape is to prevent the wire from touching any other metal or wire except the two turns of wire on either side of it in the same layer.

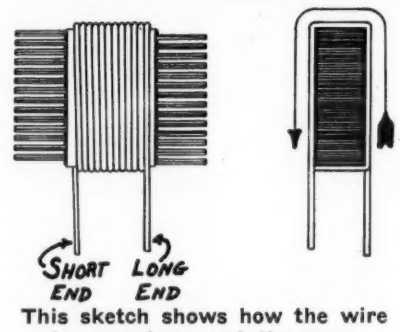
Next stack the laminations of one leg of the core in the slots of the base of the core as shown in Fig. 68. Drill and bolt the parts together as shown. The other leg of the core is then installed in a similar manner.

Fig. 66—Base of Core



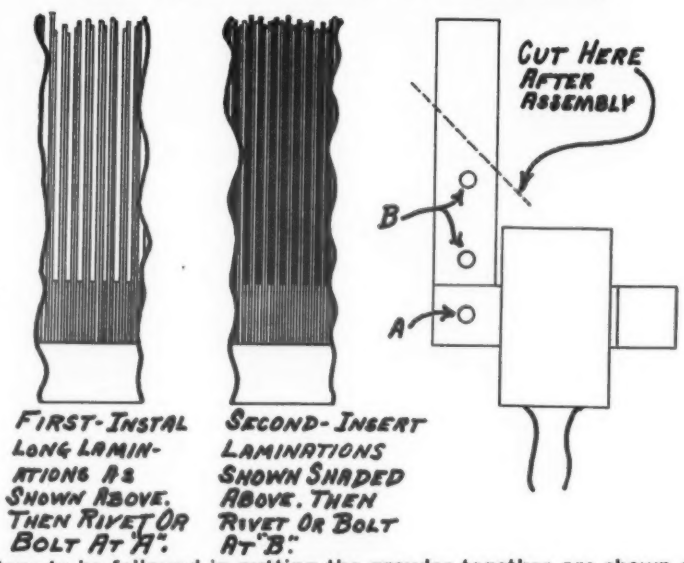
The core base is made by stacking strips of soft iron as shown.

Fig. 67—Winding



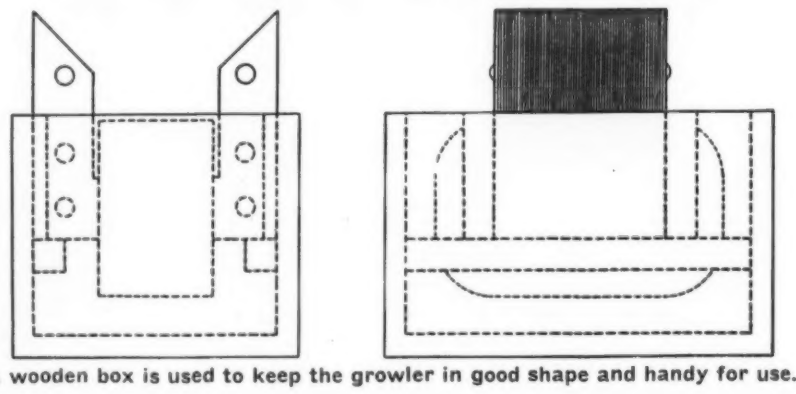
This sketch shows how the wire is wound around the core.

Fig. 68—Method of Assembly



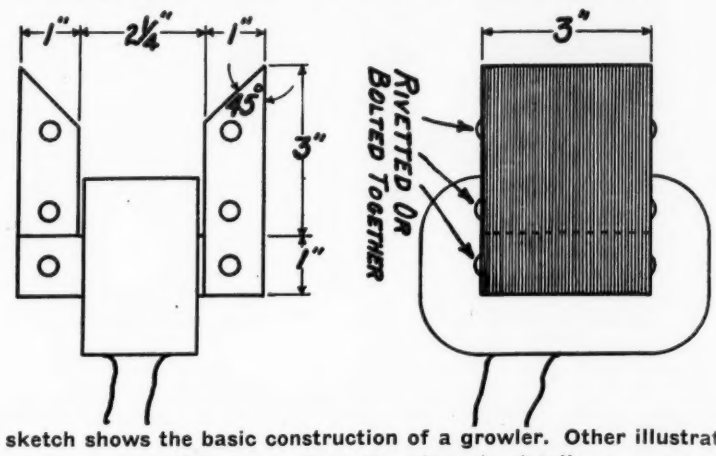
The steps to be followed in putting the growler together are shown above.

Fig. 69—Box for Growler Assembly



A wooden box is used to keep the growler in good shape and handy for use.

Fig. 65—Construction of Growler



This sketch shows the basic construction of a growler. Other illustrations on this page show the steps in detail.

After completing this assembly each leg is cut off at an angle as shown dotted.

In order that the rotor will rest uniformly on these surfaces, they must be reasonably flat and true. It is best to use a rotor, or similar cylinder to check this. A fairly good job can be done with a hacksaw followed by some grinding and filing.

Although the joint between the base and leg parts of the core are quite tight, there is possibility of the legs spreading. It is also necessary to mount the growler for convenient use. A wooden box with slots for supporting the core, as shown in Fig. 69, makes a simple effective mounting. A wooden cover, through which the legs protrude, will give added protection. The box should have holes in it for cooling of the coil when in use.

If a growler is found to draw too much current, electric light bulbs can be put in series with the coil. These will also serve as a reminder to turn off the current when the coil is not in use.

THE GROWLER SHOULD ONLY BE ENERGIZED WHEN A ROTOR IS IN PLACE ON IT. Without the rotor in place, it draws excessive current and may burn out.

11. Worn or Sticking Brushes

"Worn or sticking brushes" may cause occasional, or permanent, failure of the motor to start. This results from poor contact, from a current carrying standpoint, between the brush and the commutator. If the brush has been allowed to wear down too far, the spring may be of such design that there is not sufficient pressure of the brush on the commutator.

Cases have been kown where the brushes have been allowed to wear down enough so that the metal parts of the pigtail connection have come in contact with the commutator causing severe burning. Sticking of brushes may be caused by dirt, too tight a fit of the brush in the brush holder, interference between the pigtail and parts of the brush rigging, or some similar fault. The tight fit can usually be corrected by sandpapering the brush slightly.

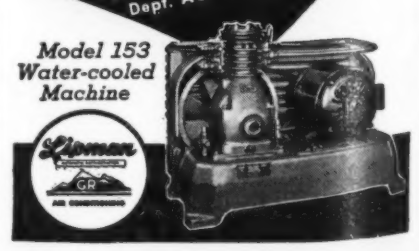
In many cases the commutator will be somewhat burned and rough. This should be smoothed up by nne sandpaper (not emery cloth) on a block of wood, or a commutator stone (piece of grindstone—not a piece of emery wheel), held against the commutator with the motor running.

A seriously burned commutator should be turned down just enough to produce a smooth surface. If any appreciable smoothing of the commutator surface is required, it may also be necessary to undercut the mica and to sand in the brushes and, if possible, run the motor with no load until the contact surface of the brush becomes smooth and shiny.

12. Weak Brush Springs

"Weak brush springs" may result from overheating, which has annealed the spring material, and the spring should be replaced. Improper adjustment of the springs or excessive brush wear may also cause this condition.

The effects of weak brush springs will tend to be similar to those covered in Section 11 on "Worn or Sticking Brushes." With a weak brush spring increasing the brush pressure, pressure on the brush with a stick should improve the motor's operation—and the spring should be replaced.



OPA Suggests Ways To Cut Refrigerator Power Consumption

WASHINGTON, D. C.—In order to conserve power, refrigerators must be used economically, the Office of Price Administration has warned civilian users of household refrigerators in outlining specific instructions in the approved methods of conserving this irreplaceable commodity.

To insure your refrigerator a longer life and conserve power don't open it any oftener or any longer than is absolutely necessary, the OPA advised. Take out of the box all things needed for the preparation and serving of the meal at the same time.

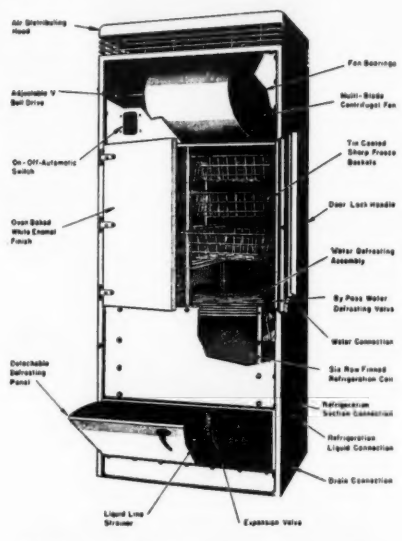
Users are told not to put hot food or dishes in the refrigerator, not to make a pantry out of it by packing it full of foods, packages, and cans. Free circulation inside the box is very important to adequate refrigeration. Everything put in takes electrical power to cool.

"Remove tops of vegetables and all paper wrappings and bags," said the OPA. "Put all left-overs in the smallest possible dishes. Work out a system of arranging the most frequently used foods near the front of the box so you don't have to waste time when you want them."

Clothier Adds Furniture

PITTSBURGH — Palace Credit Clothing Co., 623 Liberty Ave., has opened a new furniture department in its downstairs store displaying Philco radios and refrigerators, ABC washers, and Norge, Grand, and Well-Built kitchen ranges. Ed. Edwards is the department head.

Speed Freezer



This diagram shows the construction of the Frigidaire freezer described below.

* * *

Locker Plant Installs 'Speed Freezer' for Additional Service

STILLWATER, Minn.—One of the principal features of the refrigerated locker plant service furnished by Mr. and Mrs. A. C. Fossum in their plant at 312 S. Main St. here is "speed freezing" of products brought in by their customers in one of the newest refrigerating devices adapted for locker plant work.

The Frigidaire "speed freezer" installed for this purpose (of the type shown in the illustration) is a low temperature, forced air unit, employing the patented water-defrosting system, and containing a "freezing tunnel" where wire baskets of packages to be frozen are placed. Two freezings per day are obtained and the quality of the food products frozen is exceptionally high, according to Mr. Fossum.

Being desirous of devoting the maximum amount of time to servicing their customers, the Fossums aimed to have all the mechanical equipment in their plants as automatic as possible. In this respect the "water-defrosting attachment has worked out nicely and requires but a few minutes time each day to fully defrost the coil which is part of the 'speed freezer,'" Mr. Fossum declares.

The plant specializes in aged beef, and the exceptionally well equipped aging room includes Sterilamps for complete protection of the choice beef in storage. Smoking and curing of the meat are also services included.

M. W. McCarthy Co., Frigidaire dealer here, furnished the "speed freezer" and the 3-hp. compressor and the other equipment for the aging room and the chill room.

G-E Issues Last Farm Catalog 'til War's End

NEW YORK CITY — "General Electric in the Home—on the Farm," the last catalog of electrical equipment for home and farm that will be published in complete form until the end of the war, has been published by General Electric Co., George E. Mullin, Jr., manager of the farm sales section, announced.

Until appliance stocks are depleted, the 68-page 1942 catalog, which gives prices and specifications of household and farm equipment, will serve as a valuable sales tool for G-E retailers. After stocks of some appliances have run out, it will help the retailer who decides to concentrate his effort on farm items with favorable priority ratings, Mr. Mullin believes.

Both household and large storage refrigerators are included in the seven pages devoted to cabinet refrigeration.

Five pages carry illustrations, descriptions, and prices of electric ranges and water heaters, two pages of electric sinks, dishwashers, and Disposall units, two pages of all-metal kitchen cabinets and package sinks, two pages are devoted to automatic heat and air conditioning.

In the agricultural division there are three pages of farm and home wiring materials, two of G-E motors and controls for farm uses, two pages of condensing units for farm refrigeration needs, one of electric soil-heating equipment, and another of soil-sterilizing equipment.

Steel Order for Ice Refrigerator Firms Made More Flexible

WASHINGTON, D. C.—Limitation Order L-7-a governing steel for domestic ice refrigerators has been amended by the War Production Board to provide that the quotas of steel to be used in the manufacture of domestic ice refrigerators shall apply to the entire three months' period of January, February, and March instead of to each month separately.

The change was made because the provision that an ice refrigerator manufacturer's steel quota had to be used in each month worked a hardship on such manufacturer, said the WPB.

This permits a more flexible use of the same steel quotas.

Bill to Repeal Kentucky Fair Trade Law Drafted

FRANKFORT, Ky. — Repeal of Kentucky's fair trade act authorizing minimum resale price contracts between manufacturers and retailers and of the state's so-called unfair trade practice act outlawing the sale of merchandise at less than cost is being advocated under two separate bills introduced in the State Legislature here by Representative Norris McPherson, Jefferson county Democrat.

Both the fair trade act and the measure banning below cost sales became laws in 1936.

27,563 Electric Refrigerators Sold In 1941 In West Penn Area; Gain of 34.7% Over '40

PITTSBURGH — Dealer sales of electric refrigerators in the territory of West Penn Power Co. totaled 27,563 units during 1940, an increase of 34.7% over the 20,459 units sold during 1940, according to figures compiled by the utility company from dealer reports.

Electric range sales last year reached 5,744 units, a gain of 50.2% over the 3,823 units reported for 1940, and water heater sales were 930 units, almost double the 486 total for 1940.

1941 washer sales hit 21,338 units, a gain of 21% over the 1940 total of 17,627, and ironer sales of 2,700 units were 60% above the prior year's mark of 1,681. Vacuum cleaner sales were 8,765 units, an increase of 16% over the 1940 total of 7,544, while radio sales rose 5.4% to 36,773 units, as against 34,883 in 1940.

Including small appliances, dealer sales for 1941 are estimated to have a retail value of $11,730,765, an increase of 25.2% above the $9,372,832 volume estimated for 1940.

The accompanying table shows month-by-month and yearly figures for the principal major appliances.

* * *

Month	Cleaners	Dish-washers	Ironers	Radios	Ranges	Refrig-erators	Stokers	Washers	Water Heaters
January	671	4	196	3,296	198	758	45	1,569	22
February	666	2	157	2,852	230	1,089	30	1,692	29
March	888	..	143	2,656	317	1,796	36	1,749	39
April	979	7	164	2,227	573	3,863	28	1,782	88
May	778	2	185	2,125	744	4,770	23	1,862	121
June	689	4	174	2,139	625	4,138	43	1,903	69
July	642	5	250	2,222	677	4,447	73	2,028	134
August	687	8	253	2,705	528	2,870	165	2,317	88
September	718	3	252	3,244	534	1,581	180	1,962	84
October	566	4	224	2,995	462	856	166	1,525	102
November	534	3	185	3,028	347	655	143	1,430	71
December	947	5	517	7,284	509	740	75	1,519	83
Total Reported 1941	8,765	47	2,700	36,773	5,744	27,563	1,007	21,338	930
Estimated Total 1941	9,817	53	3,024	41,186	5,744	30,871	1,128	23,899	930
Total Reported 1940	7,544	35	1,681	34,883	3,823	20,459	748	17,627	486
Estimated Total 1940	8,449	39	1,883	39,069	3,823	22,914	838	19,742	486

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RATES for "Positions Wanted," 5¢ per word; minimum charge, $2.50. Three consecutive insertions, 12½¢ per word; minimum charge $6.25.

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ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

POSITIONS AVAILABLE

SERVICE and Installation men for commercial work in Cleveland territory, weekly or hourly rates. Box 1391, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

MODEL No. 25, 5 gallon cabinet type Mills Freezer, equipped with high temperature storage compartment. 3, 60-gallon Mills Hardening Cabinets. Miscellaneous—various make Ice Cream Cabinets. 1, 5 H.P. Universal 4 cylinder Water Cooled Compressor. 1, 2 H.P. Zerozone 2 cylinder Water Cooled Compressor. 2, 1½ H. P. water cooled, 4 cylinder Par Units (two months in service—practically new). 9, York 2 cylinder 1 H.P. water cooled compressors (practically new). Also a few Servels, Frigidaires, brand new knockdown hardening cabinets. Other equipment too numerous to mention. What do you need? On sale for client, Attorney Charles A. Pincus, 142 E. 32nd Street, New York, N. Y.

FOR IMMEDIATE Sale and Delivery: A quantity of brand new Fedders domestic and commercial coils, also Peerless coils, ice makers, heat exchangers, high side floats, dome coolers, all in original cartons. Special discounts. Act now for best selections. MARCO SALES COMPANY, 41 Union Square, New York City.

TAYLOR Freezers—2 Model 1040s with timer, new and in original crates. 2 Model 640-Rs; 1 new but demonstrated, 1 slightly used. 2 Dumores—demonstrators. Real bargains—write or wire AIR CONDITIONING COMPANY, 3215 McKinney, Houston, Texas.

BRAND NEW Mullens Mod. N-10 evaporators for 6 cubic ft. refrigerators can be used as replacements on high sides, dry expansion capillary systems, tube connections ⅜" pipe inlet, ¼" tube outlet, dimensions 9¾" wide 11" depth, 11" high, bolt centers 5 to 7" slotted by 9½". Limited quantity available each $7.50; 4 lots, $7.00; 12 lots, $6.50. Fully Guaranteed, for immediate delivery act at once. R. & R. REFRIGERATION EQUIPMENT CO., 508 Morris Avenue, Bronx, N. Y.

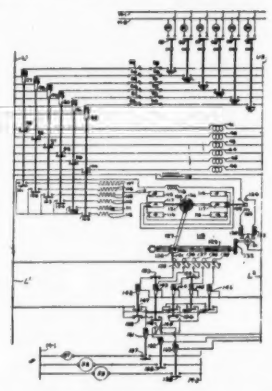
FRANCHISES AVAILABLE

ROYAL announces an exclusive line of Wall Type Beer Display and Storage Cabinets. Remote and self-contained type. Featuring up and down sliding doors—fifteen case to one hundred and ten case capacity, requiring little floor space. Porcelain finish interior and exterior, neon lighting. Limited number of established dealers desired. Write at once for full details. ROYAL STORE FIXTURE COMPANY, 847 North Broad Street, Philadelphia, Pa.

PATENTS

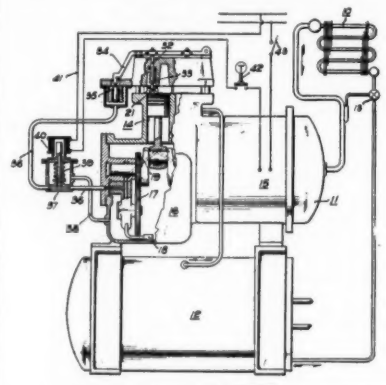
Weeks of Feb. 17 & 24 (continued)

2,274,336. CONTROL SYSTEM FOR REFRIGERATING APPARATUS. Edwin S. Lammers, Jr., Atlanta, Ga., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application April 18, 1936, Serial No. 75,078. 3 Claims. (Cl. 62—4.)



1. In refrigerating apparatus, the combination of a plurality of evaporators, a control device associated with each evaporator for initiating and terminating operation thereof, variable capacity compressor means for serving said evaporators, and means for varying the compressor capacity in operation substantially in proportion to the total capacity of the evaporators that are controlled to operate, said last-mentioned means comprising a group of resistors respectively associated with the several evaporators and having resistance values inversely proportional to the capacities of the associated evaporators, each resistor being energized by the control device of the associated evaporator simultaneously with effecting operation of the latter, said resistors being connected in parallel when energized, and means responsive to the total current flowing through the resistors that are energized for varying the total compressor capacity substantially in proportion to such current and, therefore, substantially in proportion to the total capacity of the evaporators that are controlled to operate.

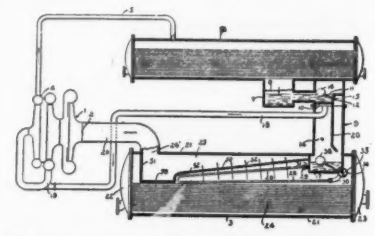
2,274,337. REFRIGERATING APPARATUS. John G. Ritter, Springfield, Mass., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application May 16, 1939, Serial No. 273,845. 6 Claims. (Cl. 230—206.)



1. The combination with a compressor and an electric motor for driving the same, of a pressure-operated unloader mechanism adapted to load the compressor upon application of sufficient fluid pressure thereto, a pump driven simultaneously with the compressor at a speed proportional to that of the compressor and developing a fluid pressure which is sufficient, at normal operating speed of the compressor, to actuate the unloader mechanism to load the compressor, means including and controlled by a valve for imposing said fluid pressure on the unloader mechanism, and means responsive to the electric current drawn by said motor for controlling said valve.

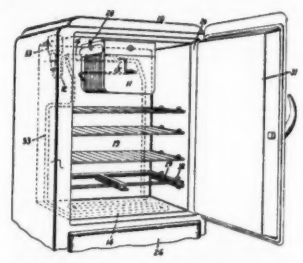
2,274,391. REFRIGERATING SYSTEM AND EVAPORATOR THEREFOR. Joseph R. Zwickl, East Orange, N. J., assignor to Worthington Pump & Machinery Corp., Harrison, N. J., a corporation of Delaware. Application Dec. 6, 1940, Serial No. 368,830. 20 Claims. (Cl. 62—8.)

3. In a refrigerating system in which a volatile liquid refrigerant is vaporized, the vapor condensed and the liquid refrigerant returned to be again vaporized, the combination, of an evaporator for the liquid refrigerant, a condenser for the refrigerant vapor, a centrifugal compressor



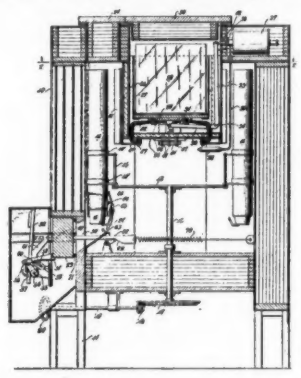
which delivers the refrigerant vapor from the evaporator to the condenser and maintains a predetermined pressure in the evaporator, a connection between said condenser and evaporator to deliver liquid refrigerant from the condenser to the evaporator, a partition in said connection dividing it into a liquid collection chamber and a flash chamber, said connection having a liquid refrigerant collection space in the bottom thereof delivering liquid refrigerant to said evaporator, a connection from said flash chamber to said compressor for delivering vapor direct to the compressor, and a dryer coil in said evaporator for drying vaporized refrigerant passing from the evaporator.

2,274,394. REFRIGERATING MACHINE. Leonard W. Atchison, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application April 24, 1940, Serial No. 331,432. 3 Claims. (Cl. 62—116.)



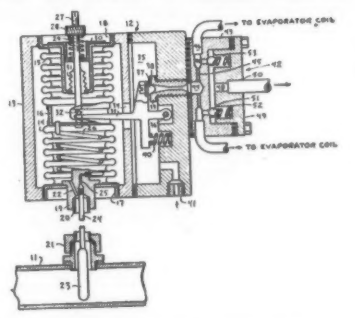
1. A refrigerator comprising a cabinet having a food storage compartment, a primary refrigerating system including a cooling element located in one region of said compartment, a secondary refrigerating system comprising a cooling portion constructed and arranged for cooling another region of said compartment and a condensing portion, means for conducting refrigerant to said cooling element, said condensing portion and said conducting means being arranged in heat exchange relationship.

2,274,613. REFRIGERATION APPARATUS. Ernest B. Miller, Annapolis, Md., assignor to William Burnet Wright, Baltimore, Md. Application March 4, 1939, Serial No. 259,921. 5 Claims. (Cl. 62—91.5.)



1. In apparatus of the character described comprising a container having a fixed metal bottom adapted to support solid carbon dioxide, a metal contactor plate movable into and out of contact with said bottom, a thermostat in the space to be refrigerated controlling such movement, and a heat transfer member in the space to be refrigerated, the improvement comprising a flexible heat conductor connecting the plate and member.

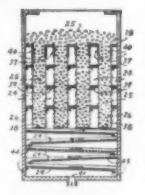
2,274,615. AIR CONDITIONING SYSTEM. Alwin B. Newton, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Original application May 6, 1938, Serial No. 206,411. Divided and this application Aug. 5, 1939, Serial No. 288,609. 3 Claims. (Cl. 62—8.)



1. In a refrigeration system, in combination, an evaporator comprising a plurality of parallel passages for refrigerant, an expansion valve, a distributor device associated with said expansion valve, said distributor device comprising a relatively small chamber, means forming a venturi for conveying refrigerant from said expansion valve into said chamber, said venturi increasing the velocity of the refrigerant so as to discharge it into the chamber in a manner to create turbulence in said chamber sufficiently to prevent segregation of gaseous and liquid refrigerant in said chamber.

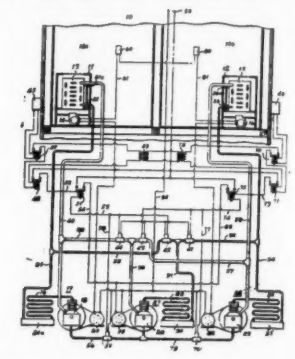
Weeks of March 3 & 10

2,274,704. APPARATUS FOR CONDITIONING AIR. Hiram Joseph Kaufman, Detroit, Mich. Application Nov. 30, 1939, Serial No. 306,788. 4 Claims. (Cl. 183—4.)



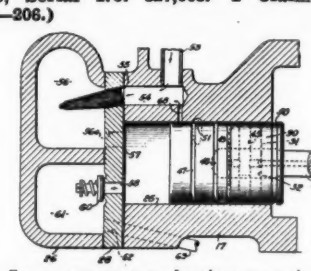
1. An air conditioning cabinet having an air inlet and an air outlet defined therein, a storage hopper located in the central upper portion of said cabinet, means defining a sealable opening.

2,274,774. REFRIGERATING APPARATUS. Jewel C. Chambers, Dayton, Ohio, assignor, by mesne assignments, to General Motors Corp., a corporation of Delaware. Application Nov. 29, 1933, Serial No. 700,171. 15 Claims. (Cl. 62—6.)



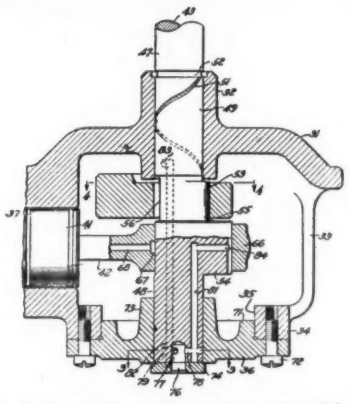
9. In an air conditioning apparatus; an evaporator, a first refrigerant liquefying unit connected to said evaporator, a booster refrigerant liquefying unit, a ray sensitive instrument automatically connecting said booster refrigerant liquefying unit to said evaporator in response to the action of rays on said instrument.

2,274,942. LUBRICATED REFRIGERANT COMPRESSOR. Jens Touborg, Tecumseh, Mich. Application March 30, 1940, Serial No. 327,063. 2 Claims. (Cl. 230—206.)



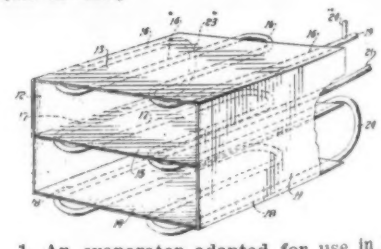
1. In a compressor having a reciprocable piston mounted in a cylinder bore having a head end, and inlet and outlet chambers communicating with the cylinder bore, oil supply means for the head end cylinder portions responsive to pressure conditions in the outlet chamber, comprising a port extending into the cylinder bore and connecting the bore with the inlet chamber, said port being so located as to be covered by the piston during all phases of reciprocation thereof, oil grooves in the piston registering with the port during movement of the piston, and means for supplying oil to the grooves, whereby oil supplied to said grooves is periodically transmitted to the port and thence to the head end of the cylinder bore in response to said pressure conditions.

2,274,943. REFRIGERATION COMPRESSOR. Jens Touborg, Tecumseh, Mich. Application May 2, 1940, Serial No. 332,973. 4 Claims. (Cl. 230—206.)



1. A hermetic compressor comprising a shell, a vertically mounted motor positioned within the shell, a piston-in-cylinder compressor mounted within the shell and below the motor, upper and lower axially aligned shaft bearings connected to said motor and compressor, one of said bearings being disposed adjacent the motor and the other of said bearings being disposed below the compressor and adjacent the lower portion of the shell, said lower shell portion being adapted to receive an oil body immersing at least a portion of said lower bearing, a main shaft having concentric portions radially mounted in both of said bearings, said shaft having a concentric portion extending above said upper bearing for connection to said motor, an eccentric portion formed on said shaft intermediate said bearings, a connecting rod for said compressor connected to said eccentric portion, a horizontally disposed radial passage formed in said lower concentric shaft portion and having open communication with the wall of said lower bearing at its outer end and with the shaft axis at its inner end, an axial passage in the lower end of the shaft communicating with the radial passage thereby to admit oil to said radial passage for centrifugal pumping, and a vertical passage drilled through said shaft in spaced relation to said axis and parallel thereto, said vertical passage extending from said radial passage through said eccentric portion to said upper bearing portion.

2,274,967. EVAPORATOR FOR REFRIGERATING SYSTEMS. Rudolph S. Nelson, Larchmont, N. Y., and Arnold D. Siedle, Canton, Ohio, assignors to The Hoover Co., North Canton, Ohio, a corporation of Ohio. Application Aug. 8, 1936, Serial No. 94,941. Renewed May 29, 1940. 3 Claims. (Cl. 62—126.)



1. An evaporator adapted for use in an absorption refrigerating system using inert gas, said evaporator comprising a continuous, jointless conduit for conduct-

(Concluded on Page 15, Column 1)

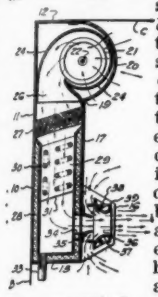
Patents (Cont.)

(Concluded from Page 14, Column 5)

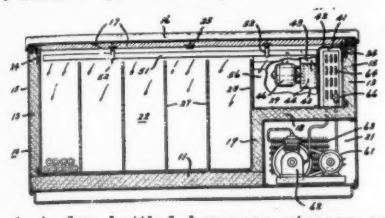
ing inert gas and a refrigerant and bent to provide sets of interconnected parallel portions in spaced parallel horizontal planes, a sheet metal box associated with said conduit and having horizontal ice tray supporting shelves, one above and in heat exchange relation with each set of said horizontal portions, the arrangement being such that said horizontal conduit portions underlie said shelves, means for conducting inert gas to said conduit and means for conducting liquid refrigerant thereto.

2,275,295. AIR CONDITIONING UNIT. George H. Greenway, Dallas, Tex. Application Aug. 12, 1939, Serial No. 289,729. 6 Claims. (Cl. 62—140.)

4. An air conditioning unit including, an elongate casing having an air inlet at its upper end which inlet extends substantially throughout the longitudinal width thereof, a grille covering said inlet, an air outlet extending substantially throughout the width of the casing at its lower end, air-current impellers disposed within the casing adjacent the inlet for circulating air downwardly through the casing, and a cooling unit mounted within the casing and having transverse coils and also having upright fins mounted on said coils, said fins having their bottom edges inclined in a direction to cause droplets of water to gravitate out of the path of the air currents.

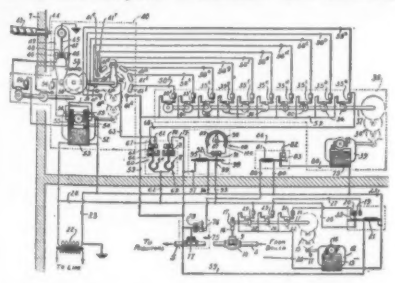


2,275,323. REFRIGERATING APPARATUS. Sylvester M. Schweller, Herman J. Dick, and J. Lowell Gibson, Dayton, Ohio, assignors to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application May 29, 1940, Serial No. 337,884. 6 Claims. (Cl. 62—102.)



1. A dry bottled beverage storage and refrigerating apparatus comprising in combination, a cabinet including a bottom, side, and end insulated walls and a top forming a horizontally elongated compartment therein, said cabinet top having an opening therein providing access to said compartment, a door or doors normally closing said compartment access opening, a closed chamber extending transversely across said horizontally elongated compartment, a cooling element of a refrigerating system disposed in said chamber, means forming an air duct having a connection with said chamber and extending outwardly therefrom along said elongated compartment, said air duct being provided with a plurality of spaced apart openings affording communication thereof with the lower portion of said elongated compartment, means beneath said cabinet top forming another air duct having a connection with said chamber and extending outwardly therefrom along said elongated compartment, said another air duct being provided with a plurality of spaced apart openings affording communication thereof with the upper portion of said elongated compartment, a fan adapted to circulate air through said duct forming means and said chamber, means for operating said fan to cause same to circulate air from said compartment through the openings in said first named duct forming means into said chamber and over the cooling element therein to cool the air, and said fan forcing the air cooled by said element out of said chamber into said another duct forming means and outwardly of the openings therein into the upper part of said elongated compartment whereby the cooled air flows downwardly in a plurality of streams along the length thereof.

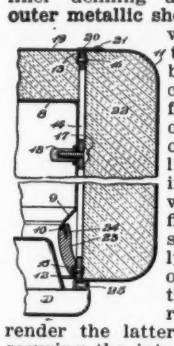
2,275,427. CONTROL FOR AIR CONDITIONING SYSTEMS. Theodore K. Greenlee, Rockford, Ill., assignor to Barber-Colman Co., Rockford, Ill., a corporation of Illinois. Application March 16, 1938, Serial No. 196,104. 7 Claims. (Cl. 236—91.)



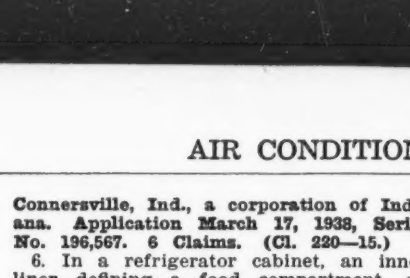
1. The combination with apparatus for conveying air conditioning medium from a remotely located primary source to a space to be conditioned, a regulating member controlling the supply of said medium to said space and movable between on and off positions, a control device operable periodically in on and off periods to control the movements of said member and cause a flow of the medium toward said space during said on periods and interruption of the flow during the off periods, an actuator for said device normally operating to change the position of the device periodically, and means closely associated with said apparatus to follow temperature changes thereof independently of the space temperature and operating when the temperature of said apparatus at a point adjacent said space falls below a predetermined value to stop said actuator with said device in on position near the beginning of an on period.

2,275,482. REFRIGERATOR CABINET CONSTRUCTION. Charles Russell Ford, Connersville, Ind., assignor, by mesne assignments, to Rex. Mfg. Co., Inc., Connersville, Ind., a corporation of Indiana. Application March 17, 1938, Serial No. 196,567. 6 Claims. (Cl. 220—15.)

6. In a refrigerator cabinet, an inner liner defining a food compartment, an outer metallic shell spaced from said liner with insulation material therebetween, hanger brackets of poor heat conductivity extending from front to back wall of the outer shell on opposite sides of the liner, the outer shell being provided with inwardly projecting lips or flanges and the ends of said brackets being rigidly connected to said lips or flanges and whereby the brackets serve to reinforce the shell and render the latter more rigid, and means securing the intermediate portions of said brackets directly to said liner and in supporting relation therewith thereby suspending the liner from and in spaced relation with respect to the outer shell.

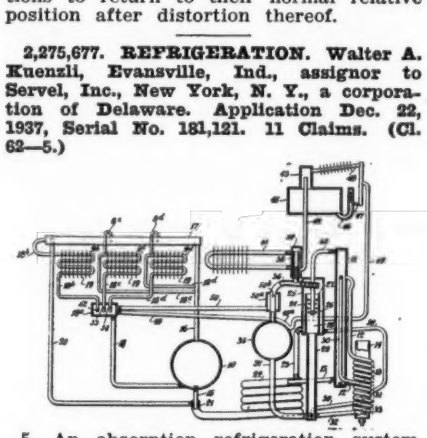


2,275,522. ICE TRAY. Harvey D. Geyer, Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application Jan. 16, 1937, Serial No. 120,897. 7 Claims. (Cl. 62—108.5.)



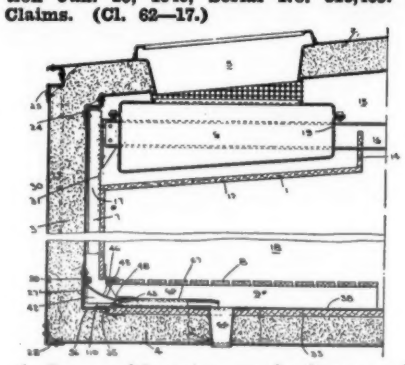
1. A grid for an ice-freezing container, comprising: two metallic sections each embodying at least one partition wall, said sections having a hinge connection normally embedded in the solid ice after the freezing of the container contents, said hinge connection having a snugly fitting resilient rubber hinge pin which permits easy relative hinge movement by torsional distortion thereof even though embedded in hard-frozen ice, said resilient hinge pin also serving to urge said sections to return to their normal relative position after distortion thereof.

2,275,677. REFRIGERATION. Walter A. Kuenzli, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Dec. 22, 1937, Serial No. 181,121. 11 Claims. (Cl. 62—5.)



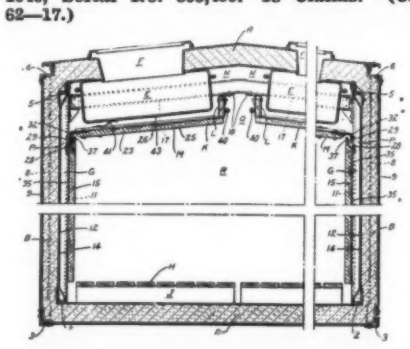
5. An absorption refrigeration system including a vapor expulsion component, members forming an absorption liquid circuit having upflow conduits and a downflow conduit connected at their upper ends above said vapor expulsion component, said upflow conduits providing parallel paths of flow, means to so introduce gas into said upflow conduits that relatively small quantities of absorption liquid at a time are caused to flow in the presence of the gas, and means to control admission of gas while maintaining circulation of liquid in said circuit.

2,275,699. REFRIGERATOR CAR CONSTRUCTION. Earl R. Swanson, Chicago, Ill., assignor to Standard Railway Devices Co., a corporation of Delaware. Application Jan. 25, 1940, Serial No. 315,465. 7 Claims. (Cl. 62—17.)



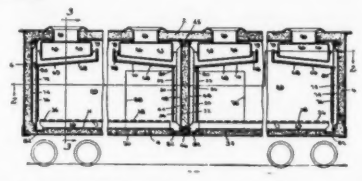
1. In a refrigerator car having a wall and a floor, refrigerating means adjacent the upper part of said wall, a vertical flue associated with said wall and adapted to conduit air and liquid from said means to the lower part of the car, a trough associated with said floor and arranged to receive liquid from said flue, a removable rack resting upon said floor to support a lading in spaced relation thereto and a foraminous sheathing provided with relatively small apertures arranged to substantially cover said trough, said sheathing being arranged to swing upwardly, said rack having a part arranged to overlie a part of said sheathing to hold the sheathing in its covering position.

2,275,717. REFRIGERATOR CAR CONSTRUCTION. Wallace E. Baillio, Chicago, Ill., assignor to Standard Railway Refrigerator Co., Chicago, Ill., a corporation of Delaware. Application Sept. 5, 1940, Serial No. 355,499. 18 Claims. (Cl. 62—17.)



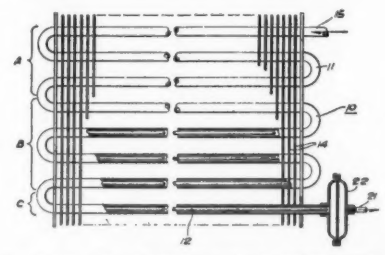
1. In a refrigerator car having a roof, a wall, and a refrigerant container below said roof, the combination of a drip pan below said container, a supporting member rigidly supported within the car, said drip pan having a part arranged to engage with said member to provide a support for the drip pan, and a spring arranged to yieldingly hold said part and said member in engaged relation.

2,275,721. REFRIGERATOR CAR CONSTRUCTION. Charles D. Bonsall, Chicago, Ill., assignor, by mesne assignments, to Standard Railway Devices Co., a corporation of Delaware. Application Jan. 8, 1940, Serial No. 312,852. 15 Claims. (Cl. 62—17.)



3. In a refrigerator car having a roof, floor, spaced apart side walls, and spaced apart end walls, a substantially vertical partition extending substantially between said side walls to divide said car into a pair of lading compartments, a doorway leading to each of said compartments, foraminous racks arranged to support the lading upon said floor and provide spaces therebetween, refrigerant containers below said roof, means cooperating with said roof and ends walls to form enclosures for certain of said containers, other means cooperating with said roof and said partition to form enclosures for others of said containers, air inlet openings to said enclosures, and means cooperating with said partition and said end walls to form flues arranged to communicate between said enclosures and said spaces.

2,275,829. REFRIGERATING APPARATUS. Robert H. Tull, Springfield, Mass., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application May 4, 1939, Serial No. 271,636. 7 Claims. (Cl. 62—115.)



1. In a closed mechanical refrigerating system, the combination of a cooling unit adapted to evaporate liquid refrigerant, a compressor for withdrawing refrigerant vapor from said cooling unit and compressing said vapor, a condenser for cooling and liquefying said compressed vapor, a conduit including a fixed flow-impeding orifice for conducting the liquid refrigerant from the condenser to the cooling unit, said condenser comprising a refrigerant-carrying tube structure having an entrance and an exit, a substantial portion of said tube structure adjacent its exit end being of relatively small refrigerant-conducting cross-sectional area, and means for cooling the surface of said tube structure, the system being arranged to locate the refrigerant level in said tube structure adjacent its exit end during normal operation, said condenser being formed to have greater heat-abstracting effectiveness per unit of refrigerant-conducting cross-sectional area of the tube structure at the portion adjacent the exit end than at the portion adjacent the entrance end of the tube structure, whereby a small change in the volume of liquid refrigerant in the portion of the tube structure adjacent the exit end thereof causes a large change in the effectiveness of heat abstraction from the refrigerant vapor in the tube structure, thereby maintaining the level of the refrigerant liquid in the cooling unit more nearly constant.

(To be Continued)

New Government Move Will Force Use Of Production Requirements Plan

(Concluded from Page 1, Column 5)

application form, PD-25X.

The effect of placing virtually all of American industry, including producers who supply the Army and Navy, under the Production Requirements Plan will be to give the War Production Board closer control of the distribution and use of all scarce materials. The most important raw materials, such as aluminum, copper, steel plates, etc., are already allocated at the producer's level. General use of the Production Requirements Plan will provide control of the flow of these materials down to the level of end products.

Because it would be physically impossible to handle the load of PRP applications if they were to be submitted immediately from all companies in all industries, the changeover from the use of blanket ratings will be continuous over a period of three months, and each industry will be notified as to the date by which the change must be completed. A considerable number of "P" orders have already been amended to provide that after a specified date, the blanket ratings assigned by such orders will be revoked, and producers who have been using them will have to apply for priority assistance under PRP.

Processing of PRP applications will be handled in cooperation with the appropriate industry and materials branches of the War Production Board in such a way that all companies producing similar products for similar uses will receive uniform treatment.

New limitation or conservation orders will continue to be issued to curtail production by non-essential and less essential industries which still use scarce materials, and to force substitutions for scarce materials wherever possible in essential industries. All ratings assigned under PRP will be subject to such controls.

The extension of PRP to cover a much broader field, and its substitution for "P" orders, will constitute another long step toward gearing the whole American economy into the war program. When the changeover is completed, priority assistance will be granted only for specified quantities of materials or products, and the War Production Board will then be in a position to go as far toward complete allocation as war needs may require.

The statistical information obtained as more and more companies operate under PRP will enable the Division of Industry Operations, in cooperation with the WPB Requirements Committee, to improve steadily the assignment of ratings and allocation of materials for various industries. In the meantime, a mechanism for controlling the distribution and uses of all scarce materials will have been set up.

The industry branches in the Bureau of Industry Branches and the priorities staff of the Bureau of Priorities have been ordered by the Director of Industry Operations to put the new policy into effect as rapidly as possible. Specific announcements will be made in each case as additional industries are affected by the program.

States has submitted applications under PRP covering 88 of its divisions and plants which have combined annual sales of $846,800,000. On the other hand, about 20% of the applications received under PRP have been from companies with an annual volume of businesses amounting to less than $100,000. For their benefit, a simpler form of application known as the Modified Production Requirements Plan was announced on Jan. 27, 1942.

PRP makes it possible for the War Production Board to give consideration in granting priority assistance to the complete pattern of operations of a company or a plant, instead of treating every priority application on a piecemeal basis. At the same time, the information furnished by applicants on Form PD-25A is of great value to the War Production Board as an indication of the general materials requirements and production facilities of American manufacturers.

About 85% of the materials and products to obtain which a preference rating has been applied for under PRP are destined for use to fill war or essential civilian orders bearing a preference rating of A-10 or higher. The other 15% of approved applications cover materials and products destined for unrated orders, but nevertheless for essential civilian use.

A special expediting department has been set up in the Production Requirements Branch to handle interim applications where prompt assistance is specially needed.

Three different methods are used to assign ratings to applicants under the Production Requirements Plan:

(1) A single rating may be assigned to all raw materials, parts, assemblies and maintenance, repair and operating supplies needed by the applicant.

(2) One rating may be assigned to most raw materials, parts, assemblies and maintenance, repair and operating supplies, while a higher rating is assigned to one or more specific items.

(3) A percentage of the applicant's total requirements for materials, etc., may be assigned one rating and the rest assigned one or more different ratings. For example, 50% of the requirements may be assigned an A-1-c rating and the other 50% a rating of A-2.

Most Producers Rally To PRP Standard

WASHINGTON, D. C. — In less than two months after the Production Requirements Plan went into effect, more than half again as many applications were received as during 7½ months under the Defense Supplies Rating Plan, which was replaced by PRP on Jan. 1.

Under PRP such producers may avoid the necessity of applying for or extending a large number of separate preference ratings by making a single application for priority assistance covering their materials requirements for a calendar quarter. On the basis of information supplied on Form PD-25A, they are given a rating or ratings to assist them in obtaining the kinds and quantities of materials and supplies needed for three months operations in war and essential civilian production.

The usefulness of the plan is indicated by the fact that one of the largest corporations in the United

Westinghouse Tells How Its Salesmen Aided In Conversion To War Work

NEW YORK CITY — Salesmen trained for peacetime tasks have become key men in the conversion of a major American company to all-out war production, the American Management Association was told at their recent meeting in New York City.

When first defense and then war demands closed normal channels of business to its salesmen, the Westinghouse Electric & Mfg. Co. drafted their "brains and imagination" to aid in the national emergency, Tomlinson Fort, assistant manager of central station sales at Westinghouse, reported.

FOUND SUB-CONTRACTORS

"They familiarized themselves with priorities regulations, located many urgently needed sub-contractors, found new war uses for peactime machines, and aided in placing retired electrical machines in active duty," Mr. Fort said.

"To help maintain production in vital plants, our salesmen have explained to customers how they can get repair parts for old machines while priorities prevent the buying of new ones. Thus the salesman is serving his country, his customer, and his company," he continued, adding:

"Our sales organization brought in $300,000,000 worth of defense orders for the company to work on before America entered the war. By last July, 60% of the company's unfilled orders were for defense equipment. Since Pearl Harbor, every effort has been made to complete the conversion of our facilities to war work.

OLD EQUIPMENT

"This war sales force has helped other companies locate old electrical equipment and bring it back into service," he said. "For example, a salesman in up-state New York helped a small railroad get a switching locomotive from a customer in the middle west. A salesman in Memphis helped a munitions manufacturer obtain some used motors which permitted his plant to start operations."

Many Westinghouse salesmen have been transferred to marine sales work. This business is 20 times what it was three years ago. Other salesmen are helping handle the rapidly expanding demand for electric motors in the machine tool industry, the speaker explained.

"We have helped hundreds of customers by advising them of ways to obtain war orders. Our Washington office has been a source of information on the progress of various programs of the Government.

"Our salesmen have been of great help to us in placing sub-contracts with companies in 24 states for parts of war equipment which we could not manufacture fast enough alone," Mr. Fort said. He continued:

"For example, one of our salesmen, calling on a rubber company, saw the mold department of that company shutting down. He started negotiations which resulted in keeping that mold department running—making motor frames for us as a sub-contractor.

"If we learn nothing else in this war, it will be the value of trained men such as these salesmen who have long had their finger on the pulse of the electrical industry. Our own hope of victory lies not only in the valor of our armed forces, but in the ability of trained Americans to outproduce our enemies."

Stewart-Warner Profit In '41 Is $1,656,680

CHICAGO—Stewart-Warner Corp. and subsidiaries report net profits of $1,656,680 for 1941 which represents a 12% increase over 1940's $1,470,804. This is equal to $1.30 per share on 1,300,582 shares as compared to $1.18 per share in 1940.

Gross sales were $53,933,908, an increase of 84% over 1940 sales. Deductions for federal and other income taxes totaled $4,586,158 against $828,037 for 1940.

Saunders Resigns M-H Post to Join WPB

CHICAGO — Charles L. Saunders has resigned as resident vice president of Minneapolis-Honeywell Regulator Co. in charge of the Chicago district, to assume new duties as Chief, Instrument Section, General Industrial Equipment Branch, War Production Board.

Priorities Bureau Staff Appointed

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contact branch chief—E. E. Pratt; industrial contact section—Mason Manghum.

Head priority specialist, Division of Production—W. G. W. Glos; head priority specialist, Office of Petroleum Coordinator—James E. Hughes; head priority specialist, Division of Materials—H. K. McCook; head priority specialist, Division of Industry Operations—Joe M. Tucker; procedure section chief—E. V. Russ.

A full staff of priority specialists has been assembled for assignment to all of the industry branches in the WPB.

Price Ceilings Placed On Appliance Lines

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Price Control Act. Willful violation of a regulation, according to the act, makes the violator liable, upon conviction, to a fine of as much as $5,000 or to imprisonment for not more than one year, or both.

Acting Administrator Hamm declared that "this action makes price control a matter of direct and personal interest to millions of Americans for the first time.

"Until now," he continued, "OPA has regulated at retail only the prices of automobiles, tires, and gasoline.

"Since well over 100 commodities and manufactured articles (including several of the products named) have been under price control at the producing level for varying lengths of time, the nation's manufacturers are quite familiar with our regulations, and to a lesser degree, so are wholesalers and some retailers.

"By our previous actions, which were timed to coincide with the orders of the WPB that cut production sharply, we feel that OPA effectively prevented an early price runaway at producing levels. What we are saying by this order is that the public shall not be compelled to submit to unreasonable and inflated prices at retail simply because supplies are short."

Designed to eliminate defrosting troubles which generally develop at since customers can come directly to the farm for their food supplies.